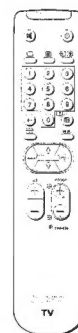


# SERVICE MANUAL

# BE-4A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-21M3A	RM-836	Italian	SCC-J05FA	KV-21M3K	RM-836	OIRT	SCC-J03KA
KV-21T3A	RM-836	Italian	SCC-J05GA	KV-21T3K	RM-836	OIRT	SCC-J03LA
KV-21M3B	RM-836	French	SCC-J06HA	KV-21M3L	RM-836	Irish	SCC-J02EA
KV-21T3B	RM-836	French	SCC-J06JA	KV-21T3L	RM-836	Irish	SCC-J02FA
KV-21M3D	RM-836	AEP	SCC-J08GA	KV-21T3R	RM-836	OIRT	SCC-J03MA
KV-21T3D	RM-836	AEP	SCC-J08HA	KV-21M3U	RM-836	UK	SCC-J01FA
KV-21M3E	RM-836	Spanish	SCC-J04GA	KV-21T3U	RM-836	UK	SCC-J01GA
KV-21T3E	RM-836	Spanish	SCC-J04HA				



TRINITRON® COLOR TV  
**SONY®**



ITEM	MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20 UHF: E21-E69, S21-S41 HYPER: S1-S41	PAL	
French	B/G/H, L	VHF: E2-E12, F2-F10, B-Q UHF: E21-E69, F21-F69 HYPER: S1-S41	PAL, SECAM	
AEP	B/G/H	VHF: E2-E12 UHF: E21-E69 HYPER: S1-S41	PAL, SECAM	
Spanish	B/G/H	VHF: E2-E12 UHF: E21-E69 HYPER: S1-S41	PAL	
OIRT	B/G, D/K	B/G VHF: E2-E12 UHF: E21-E69 D/K VHF: R01-R12 UHF: R21-R69 Hyper : S1-S41	PAL, SECAM	
Irish UK	I	UHF: U21-U69 VHF: A-J (Irish) UHF: U21-U69 (UK)	PAL	

MODEL	21M3A 21T3A	21M3B 21T3B	21M3D 21T3D	21M3E 21T3E	21M3K 21T3K 21T3R	21M3L 21T3L	21M3U 21T3U
Power Consumption	58W	58W	58W	58W	58W	58W	75W

## SPECIFICATIONS

**Picture Tube** Super Trinitron  
Approx. 54.5 cm (21 inches)  
(Approx. 51 cm picture measured diagonally)

**Sound output** 4W (RMS)  
5W (music power)  
**Dimensions** 518x474x488 mm approx.  
**Weight** Approx. 20 kg  
**Supplied accessories** RM-836 Remote Commander (1)  
IEC designated batteries (2)  
**Other features** TELETEXT (for KV-21T3 models)

### Rear/Front Terminals

#### [REAR]

- 1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB

#### [FRONT]

- Video (phono jack)
- Audio (phono jacks)
- Headphone jack - minijack

#### [RM-836]

**Remote control system** Infrared control  
**Power requirements** 3V dc (2 batteries) R6 (size AA)  
**Dimensions** Approx. 210x45x24 mm (w/h/d)  
**Weight** Approx. 90g  
(Not including battery)

**Design and specifications are subject to change without notice.**

## TABLE OF CONTENTS


<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>1. GENERAL</b>			<b>5. DIAGRAMS</b>		
	Getting Started .....	7	5-1.	Block Diagram .....	23
	TV Operation .....	8	5-2.	Circuit Boards Location .....	26
	Teletext Operation (Only for KV-21T3 models) .....	8	5-3.	Schematic Diagrams and Printed Wiring Boards .....	26
	Menu Operation .....	9		*A Board .....	31
	Optional Connections .....	12		*C Board .....	35
	Additional Information .....	12	5-4.	Semiconductors .....	37
			5-5.	IC Block Diagrams .....	38
<b>2. DISASSEMBLY</b>			<b>6. EXPLODED VIEWS</b>		
2-1.	Rear Cover Removal .....	13	6-1.	Chassis .....	40
2-2.	Service Position .....	13			
2-3.	Picture Tube Removal .....	14	<b>7. ELECTRICAL PARTS LIST</b> .....		42
<b>3. SET-UP ADJUSTMENTS</b>					
3-1.	Beam Landing .....	15			
3-2.	Convergence .....	16			
3-3.	Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness .....	18			
<b>4. CIRCUIT ADJUSTMENTS</b>					
4-1.	Electrical Adjustments .....	19			
4-2.	Test Mode 2 : .....	20			
4-3.	BE-4A Self Diagnostic Software .....	22			

**CAUTION**

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

**WARNING !!**

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.  
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

**SAFETY-RELATED COMPONENT WARNING!!**  
COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.


**ATTENTION**

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

**ATTENTION !!**

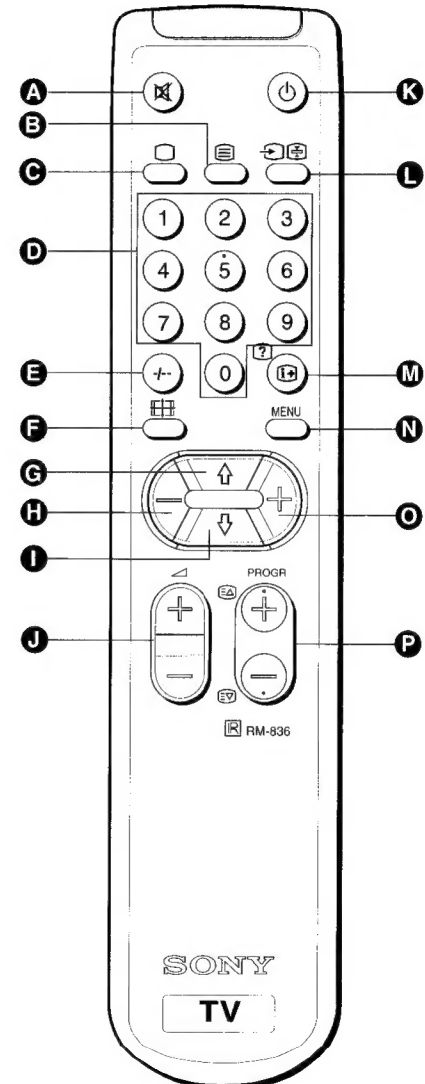
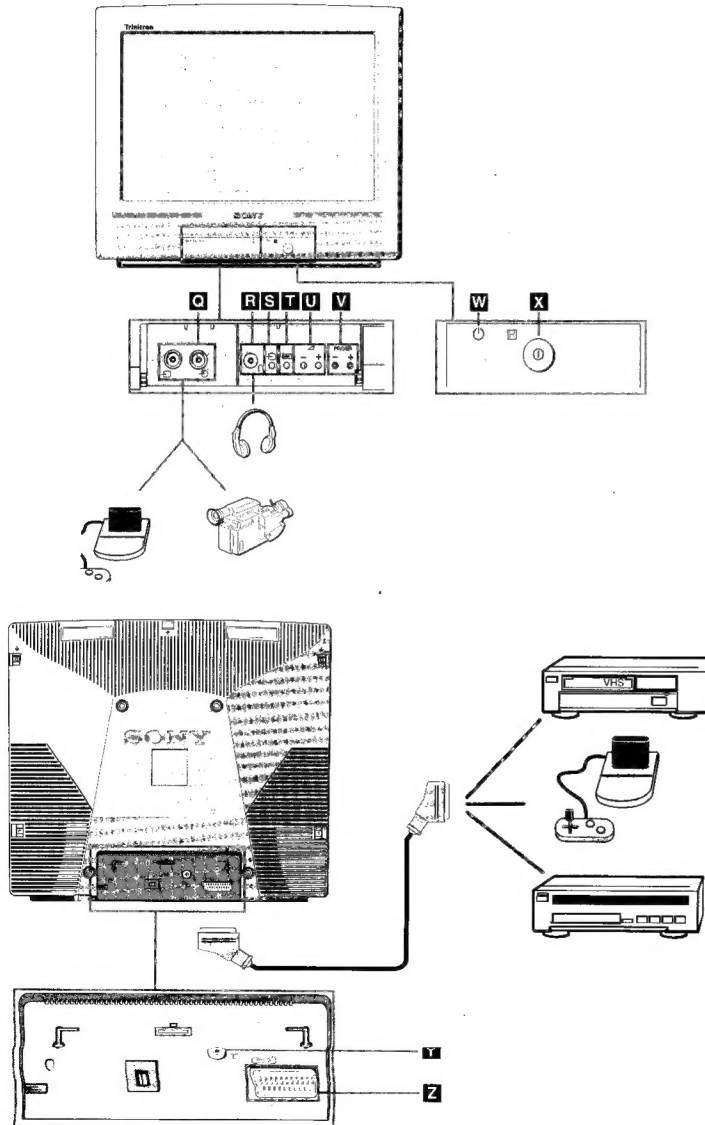
AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANAGE. LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE A L'ALIMENTATION SECTEUR.

**ATTENTION AUX COMPOSANTS RELATES A LA SECURITE!!**

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY.

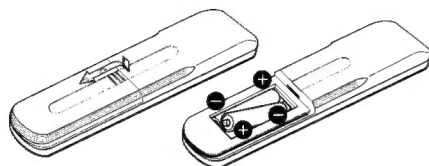
## SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



## Step 1

### Inserting the Batteries into the Remote Commander



## Step 2

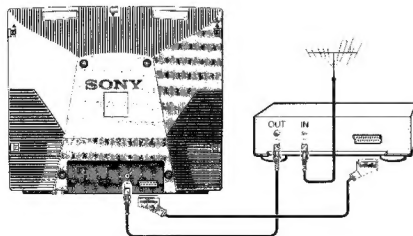
### Connecting the Aerial

If you are connecting a VCR, skip to step 3.

Connect an external aerial to the socket **Y**.

## Step 3

### Connecting a VCR



- It is recommended to tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 12.

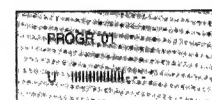
## Step 4

### Presetting Channels Automatically

TV searches for all available channels. If manual tuning is preferred see Menu option - Presetting Channels Manually.

- 1 Plug into mains.  
Press power switch **⏻** on TV set.

- 2 Press and hold **▶** **T** on TV set for about 2 seconds.  
Auto tuning starts and the following screen shows.



- Notes**
- When Auto tuning stops the programme on position 1 is seen.
  - **Non Teletext models (KV-21M3U/21M3L only)**  
- channels are stored in no particular order.
  - **Teletext models (KV-21T3U/21T3L only)**  
- channels are automatically stored as follows:

	KV-21T3U	KV-21T3L
Programme 1	BBC1	RTE1
Programme 2	BBC2	RTE2
Programme 3	ITV	BBC1
Programme 4	CH4 or S4C	BBC2
Programme 5	CH5 (if available in your area)	ITV
Programme 6	-	CH4 or S4C
Programme 7	-	CH5 (if available in your area)

## TV Operation

## TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the Remote Commander.

To	Press
Switch on	① <b>X</b> on TV
Switch off temporarily	⏻ <b>K</b> TV is now in standby mode, ⏻ indicator <b>W</b> on TV lights.
Switch on again	□ <b>C</b> , PROGR +/- <b>P V</b> or any number button <b>D</b>
Switch off completely	① <b>X</b> on TV To save energy we recommend switching off completely when TV is not in use.
Select programmes	PROGR +/- <b>P V</b> or number buttons <b>D</b> For double digit numbers press -/-- <b>E</b> then the number e.g. For 23, press -/-- <b>E</b> then 2 and 3.
Display the programme number	<b>I+M</b> Press again to make programme number disappear.
Adjust the volume	△+/- <b>J U</b>
Mute the sound	⏸ <b>A</b> Press again to restore sound.
View video input	↔ <b>L S</b> Press □ <b>C</b> to return to TV programme.
View RGB input (eg to connect playstation)	↔ <b>L S</b> twice. RGB ↔ will appear on screen Press □ <b>C</b> to return to TV programme.
View programmes in 16:9 mode	⏏ <b>F</b> Press again to return to 4:3 mode.

**Note** • ⏏ **F** is to be used to optimise the viewing of 16:9 signals, which will be available in the future.

## Teletext Operation (only for KV-21T3)

## Viewing Teletext

Teletext is an information service broadcast by TV stations.

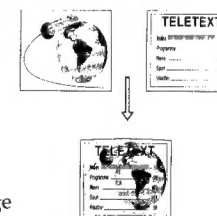
- 1 Select the channel which carries the teletext service you wish to receive.
- 2 Press **⏻ B** to switch on teletext.
- 3 Input three digits for the page number using the programme number buttons **D** or PROGR +/- **P V**.
- 4 Press □ **C** to switch off teletext.

**Note** • Teletext errors may occur if the broadcasting signals are weak.

## Using Other Teletext Functions

## Superimposing teletext on the TV

Press **⏻ B** once in teletext mode or twice in TV mode to superimpose teletext on the TV screen.  
Press **⏻ B** again to cancel superimposing.



## Freezing a teletext subpage

Press **⏻ L** (HOLD) to freeze the subpage. Freezing the page prevents the information that is displayed from being updated.  
Press **⏻ L** to cancel HOLD and allow update to continue.

## Revealing concealed information (eg: answers to a quiz)

Press **⏻ M** to reveal information.  
Press again to conceal the information.

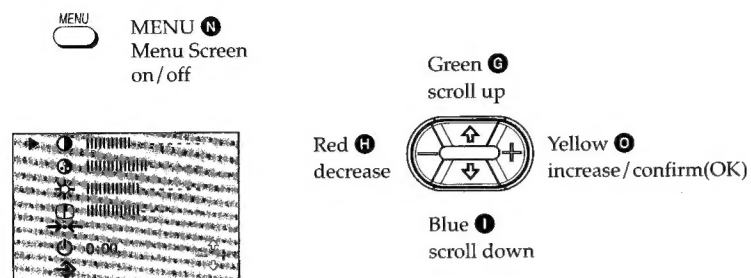
## Using colour buttons to access pages

When the colour coded menu appears at the bottom of a page, press the colour button (red, green, blue or yellow) **H G B Y** to access the corresponding page.

**Note** • A programme status message in a blue box may appear when you change programmes (depends on broadcasters).

## MENU Operation

Use buttons on Remote Commander to control Menu screen.



## Adjusting the Picture

- 1 Press MENU **N**.
- 2 Press green **G** or blue **I** button to select the item you wish to change.

Symbol	Item	-	Effect	+
<b>I</b>	Picture	Less		More
<b>S</b>	Colour	Less		More
<b>S</b>	Brightness	Darker		Brighter
<b>D</b>	Sharpness	Softer		Sharper

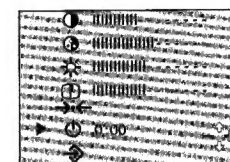
- 3 Press red **H** or yellow **O** button to change levels.
- 4 Press MENU **N** to return to normal TV screen.

**Note** • To reset to factory preset picture levels, press green **G** or blue **I** button to select **---** and press yellow (OK) **O** button.

## Using the Sleep Timer

The TV may be set to switch to the standby mode automatically after a length of time chosen by you. You may set the time in 30 minutes steps up to 4 hours.

- 1 Press MENU **N**.
- 2 Press green **G** or blue **I** button to select **⏻**.
- 3 Press red **H** or yellow **O** button to set time delay.  
0.00 (OFF) 0.30 1.00 1.30 .... 4.00
- 4 Press MENU **N** to return to normal TV screen.  
When watching TV, press **⏻** **M** to display time remaining.



## Auto Standby (for TV mode only)

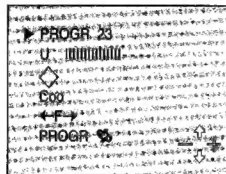
As a safety feature the Auto Standby function has been added to this model. If no signal is received for a period of 30 minutes, the TV will automatically switch to standby mode.

To return to normal TV operation, press **⏻** **C**, **PROGR +/-** **P** **V** or any other number button **D**.

## Presetting Channels Manually

Up to 100 programme positions are available for presetting channels.

- 1 Press MENU **N**.
- 2 Press green **G** or blue **B** button to select ⇨ and press yellow (OK) **O** button.
- 3 Select programme number using PROGR +/- **P V** or the number buttons **0**.

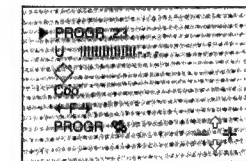


- 4 Press green **G** or blue **B** button to select tuning bar (|||||) and press red **H** or yellow **O** button to start channel search. When a channel is found the tuning bar stops moving and you see the picture.
- 5 If you want to store, press green **G** or blue **B** button to select ◇ and press yellow (OK) **O** button. If you do not want to store, press red **H** or yellow **O** button to continue search.
- 6 Repeat steps 3 to 5 for all other channels.
- 7 Press MENU **N** to return to normal TV screen.

## Skipping Programme Positions

You can skip unused programme positions when selecting channels with the PROGR +/- **P V** buttons. You can still select them, however, using the number buttons **0**.

- 1 Press MENU **N**.
- 2 Press green **G** or blue **B** button to select ⇨ and press yellow **O** button.
- 3 Select programme number you want to skip using PROGR +/- **P V** button or number buttons **0**.



- 4 Press green **G** or blue **B** button to select Coo and press yellow (OK) **O** button.
- 5 Press green **G** or blue **B** button to select ◇ and press yellow (OK) **O** button to store.
- 6 Repeat steps 3 to 5 for other unused programme positions.
- 7 Press MENU **N** to return to normal TV screen.

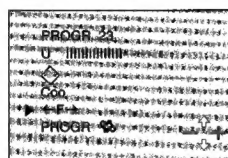
**Note** • To restore a skipped programme number, refer to "Presetting Channels Manually".



## Fine-Tuning Channels

You can fine tune a stored channel if necessary.

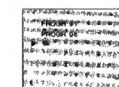
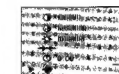
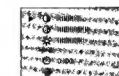
- 1 Select the channel you wish to fine tune.
- 2 Press MENU **N**.
- 3 Press green **G** or blue **B** button to select ⇨ and press yellow (OK) **O** button.
- 4 Press green **G** or blue **B** button to select ⇐→ and use red **H** or yellow **O** button to adjust tuning.
- 5 Press green **G** or blue **B** button to select ◇ and press yellow (OK) **O** button to store.
- 6 Press MENU **N** to return to normal TV screen.



## Exchanging Programme Positions

After tuning you may wish to change the order of the channels on your TV.

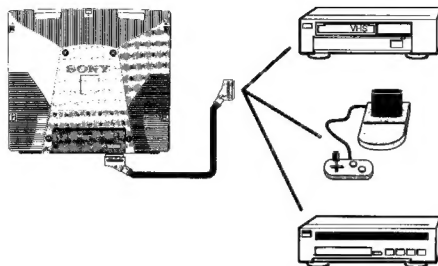
- 1 Press MENU **N**.
- 2 Press green **G** or blue **B** button to select ⇨ and press yellow (OK) **O** button.
- 3 Press green **G** or blue **B** button to select PROGR **G** and press yellow (OK) **O** button.
- 4 Press red **H** or yellow **O** button until the channel you wish to rearrange appears on screen, then press the blue button once.
- 5 Press red **H** or yellow **O** button to select the new programme number (eg PROGR 01) for your selected channel.
- 6 Press blue **B** button to select **G** and press yellow (OK) **O** button to exchange the channels.
- 7 Repeat steps 4 to 7 if you wish to change the order of the other channels on your TV.
- 8 Press MENU **N** to return to normal TV screen.



## Optional Connections

### Using the Connectors

Your TV has one 21-pin connector **Z** on the rear of the set and two connectors (phono jacks: **→** video, **→** audio) **Q** on the front of the set. You can connect optional audio or video equipment to these connectors, such as a VCR, video games or a video disc player.



- 1 Press **→** **L S** to view the video input signal.
- 2 Press **→** **L S** again to view RGB/playstation signal. RGB **→** will appear on screen.
- 3 Press **→** **L S** or **□** **C** to return to the normal TV screen.

**Note** • To avoid picture distortion, do not connect equipment to the 21-pin connector and the front connectors at the same time.

### Connecting Headphones

Plug in the headphones to the **→** **R** socket on the front of the TV set to mute the sound from the speaker.

## Additional Information

### Troubleshooting

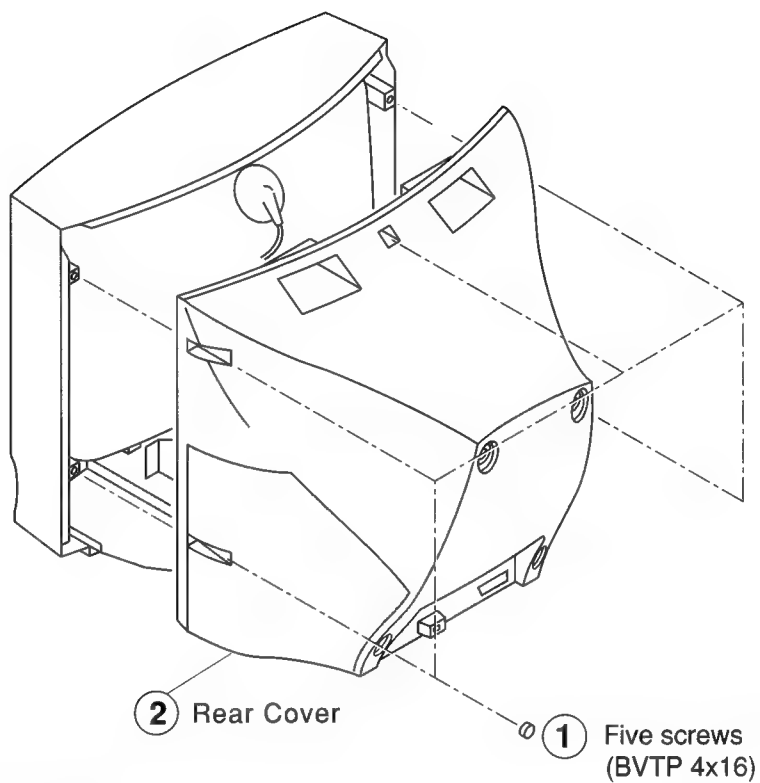
Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture, screen is dark, no sound	<ul style="list-style-type: none"> <li>Plug the TV in.</li> <li>Press <b>①</b> <b>X</b> on the TV.</li> <li>Press <b>□</b> <b>C</b> or the programme number <b>①</b> on the remote commander if <b>→</b> indicator <b>W</b> is on.</li> <li>Check the aerial connection.</li> <li>Check that the video source is on.</li> <li>Turn the TV off for 3 or 4 seconds and then turn it on again using <b>①</b> <b>X</b>.</li> </ul>
Poor or no picture (screen is dark, sound is good)	<ul style="list-style-type: none"> <li>Press MENU <b>N</b> and adjust brightness picture and colour levels.</li> </ul>
Good picture, no sound	<ul style="list-style-type: none"> <li>Adjust the volume <b>△</b> <b>+/-</b> <b>①</b> <b>U</b>.</li> <li>Disconnect any headphones.</li> <li>Press <b>⊗</b> <b>A</b> if <b>⊗</b> is displayed on the screen.</li> </ul>
No colour on colour programmes	<ul style="list-style-type: none"> <li>Press MENU <b>N</b> and adjust colour balance.</li> <li>Press MENU <b>N</b> and reset to factory settings.</li> </ul>
Distorted picture when you change programmes or select teletext	<ul style="list-style-type: none"> <li>Turn off the equipment connected to the 21-pin connector <b>Z</b> when this equipment is not in use.</li> </ul>
Remote commander does not function	<ul style="list-style-type: none"> <li>Replace the batteries.</li> </ul>

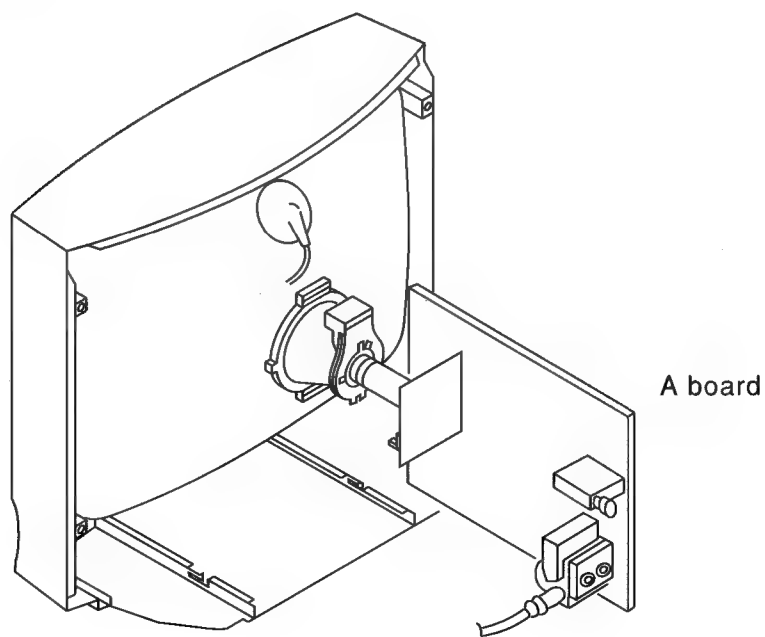
• If you continue to have these problems, have your TV serviced by qualified personnel.  
 • NEVER open the casing yourself.

## SECTION 2 DISASSEMBLY

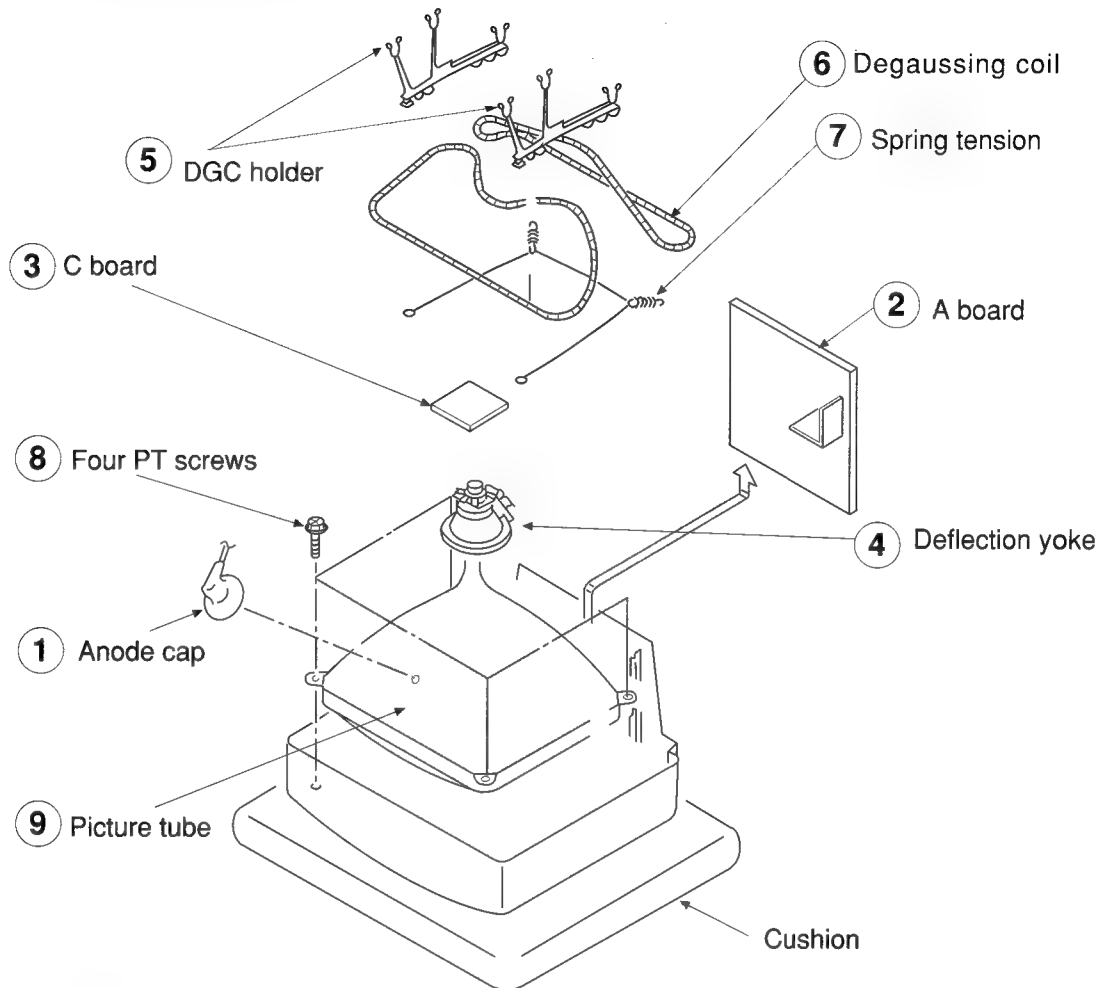
### 2-1. REAR COVER REMOVAL



### 2-2. SERVICE POSITION



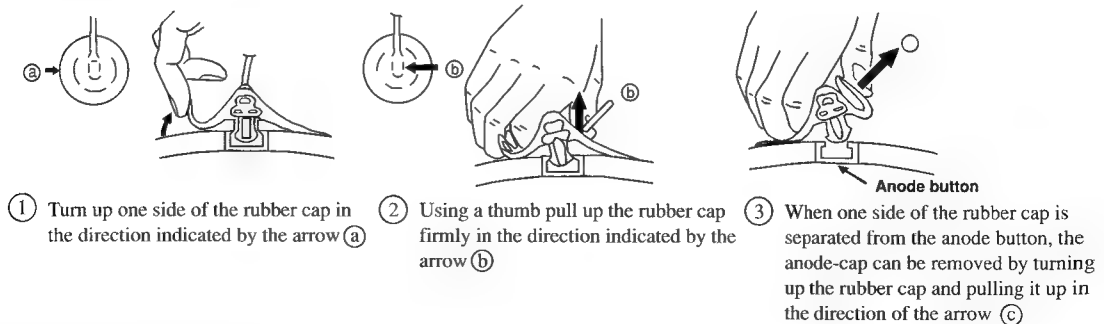
## 2-3. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

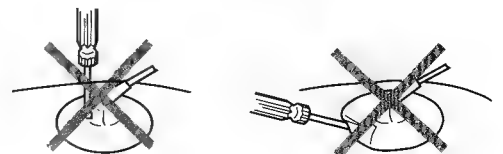
**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

#### \* REMOVING PROCEDURES.



#### • HOW TO HANDLE AN ANODE-CAP

- 1 Don't damage the surface of anode-cap with sharp shaped material !
- 2 Don't press the rubber hardly not to hurt inside of anode-caps !  
A metal fitting called as shatter-hook terminal is built into the rubber.
- 3 Don't turn the foot of rubber over hardly !  
The shatter-hook terminal will stick out or damage the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with the rated power supply voltage, unless otherwise noted.

The Contrast and Brightness controls should be set as follows unless otherwise noted:

- CONTRAST control ..... 80%  
(or Normal by commander)
- ☼ BRIGHTNESS control ..... 50%

Perform the adjustments in the following order:

1. Beam Landing
2. Convergence
3. Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness.
4. Focus

**Note:** Test Equipment Required.

1. Colour bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

#### Preparation:

- In order to reduce the influence of external magnetic forces on the picture tube, face the TV set in an easterly or westerly direction.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

#### 3-1. BEAM LANDING

Demagnetize with a degausser.

1. Input an all white raster signal from the pattern generator.  
CONTRAST } normal  
BRIGHTNESS }
2. Switch the raster signal of the pattern generator to Red.
3. Move the deflection yoke backward, and adjust with the purity control so that Red is at the centre and the Blue and Green are evenly spaced at the sides. see (Fig. 3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes Red. (Fig. 3-1)
5. Switch the raster signal to Blue and then Green to confirm the condition.
6. When the position of the deflection yoke has been determined, tighten it with the deflection yoke mounting screw.
7. When the landing at the corners is not correct, adjust by using disk magnets. (Fig. 3-4)

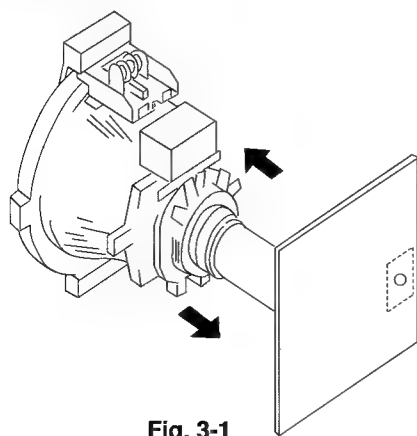


Fig. 3-1

Fig. 3-2

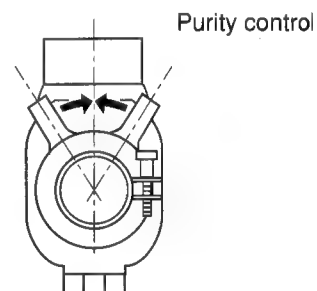


Fig. 3-3

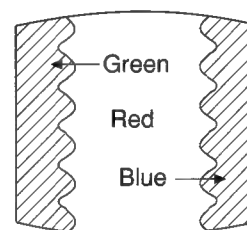
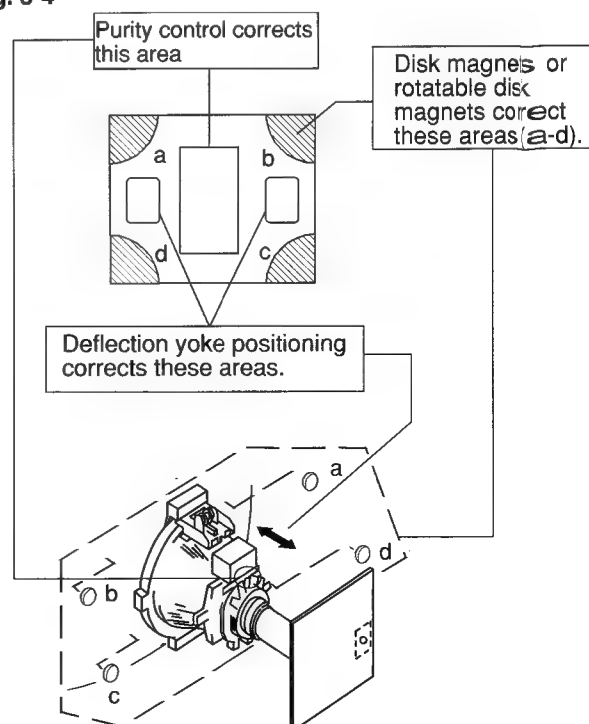


Fig. 3-4

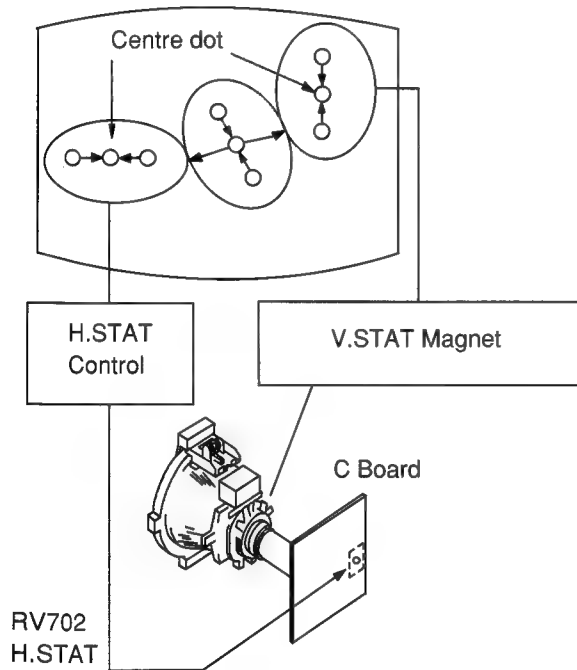


### 3-2. CONVERGENCE

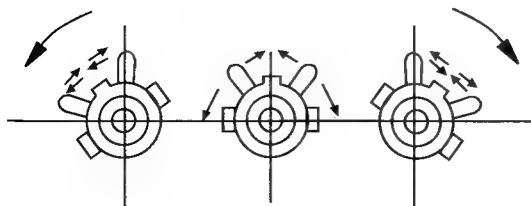
#### Preparation:

- Before starting, perform FOCUS, H.SIZE, and V.SIZE adjustments.
- Set the BRIGHTNESS control to minimum.
- Input a dot pattern from the pattern generator.

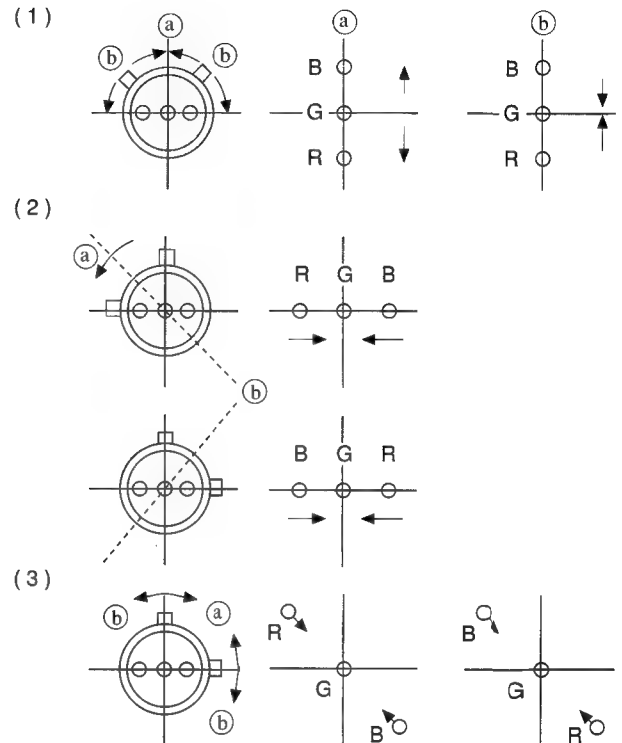
#### (1) Horizontal and Vertical Static Convergence



1. Adjust the H. STAT control to converge the Red, Green and Blue dots at the centre of the screen. (Horizontal movement)
  2. Adjust the V. STAT magnet to converge the Red, Green and Blue dots at the centre of the screen. (Vertical movement)
- If the horizontal dots cannot coincide with variable range of the H. STAT convergence, adjust together with the V. STAT convergence while tracking.  
(Adjust the convergence by tilting the V. STAT convergence or by opening or closing the V. STAT convergence.)



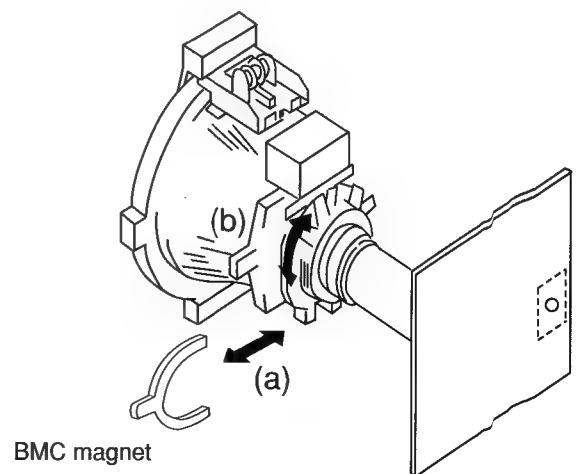
3. When the V. STAT magnet is moved in the direction of the (a) and (b) arrows, the Red, Green and Blue dots move as shown below.



If the Red and Blue dots do not converge with the Green dots, perform the following steps.

1. Move the BMC magnet (a) to correct for insufficient H. static convergence.
2. Rotate the BMC magnet (b) to correct for insufficient V. static convergence.

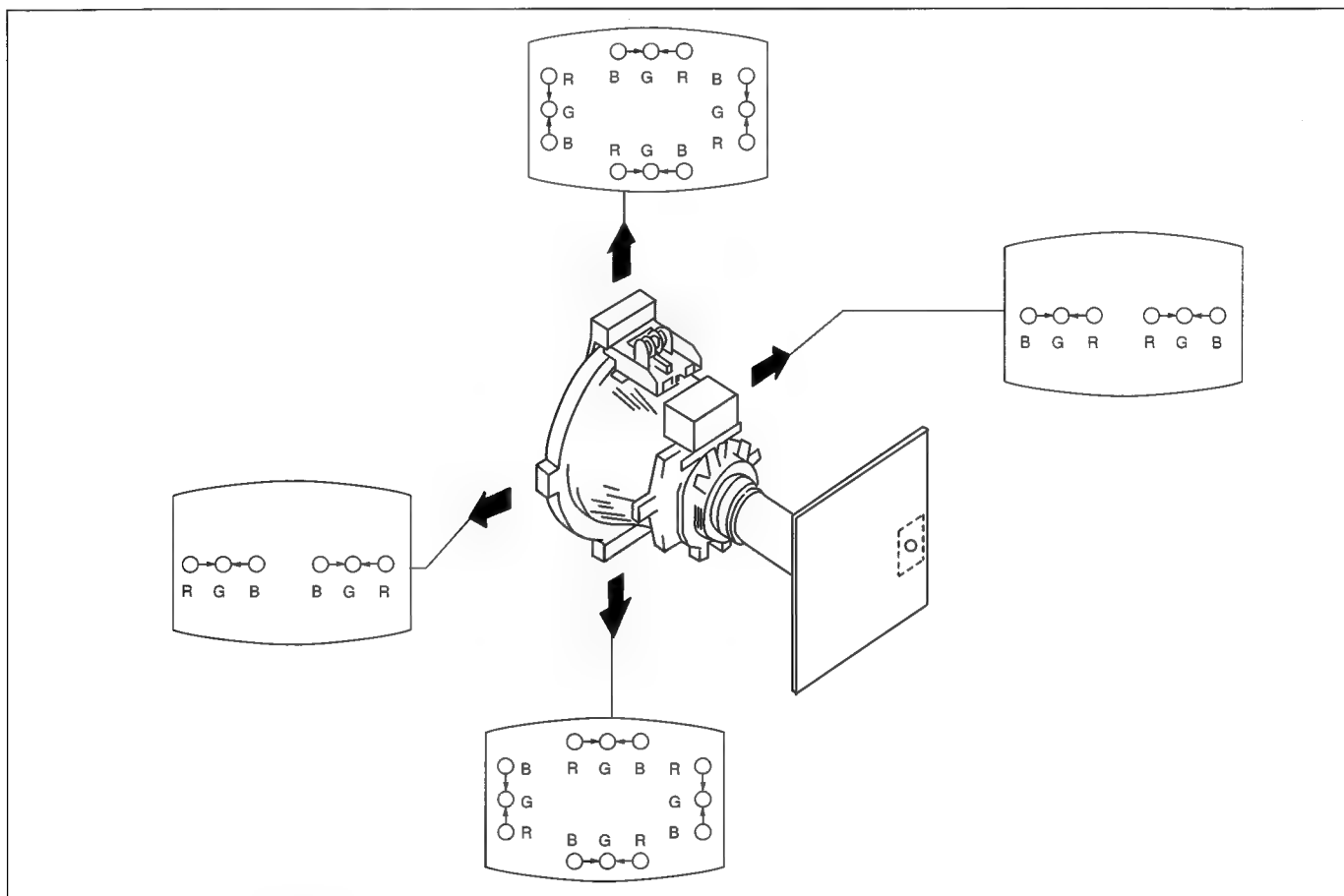
In either case, repeat the Beam Landing Adjustment.



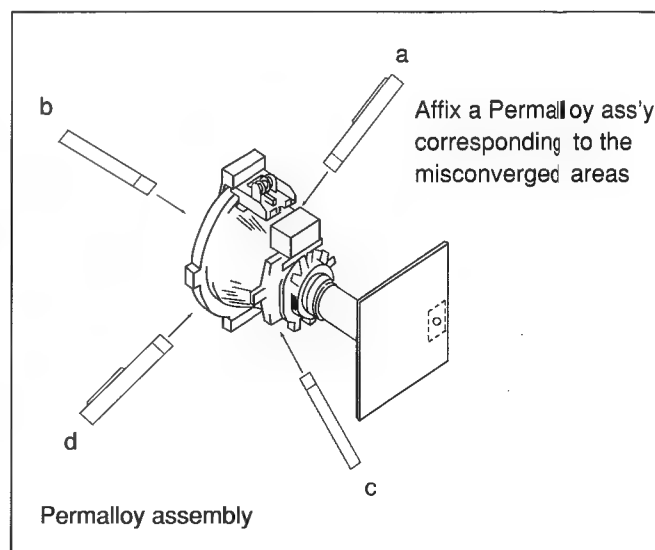
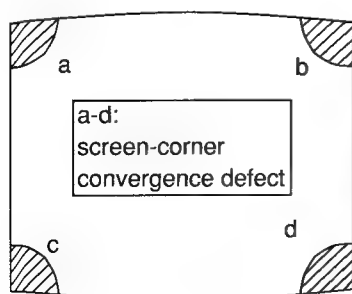
## (2) Dynamic Convergence Adjustment

### Preparation:

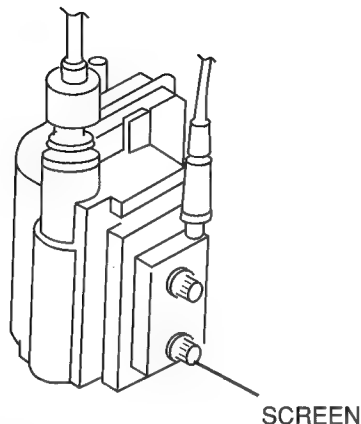
- Before starting to perform the Horizontal and Vertical static convergence adjustment.
1. Slightly loosen the deflection yoke screw.
  2. Remove the deflection yoke spacers.
  3. Move the deflection yoke for best convergence as shown below.
  4. Tighten the deflection yoke screw.
  5. Install the deflection yoke spacers.



## (3) Screen-corner Convergence.



### 3-3. SCREEN(G2), DRIVE, WHITE BALANCE, SUB COLOUR and SUB BRIGHTNESS.

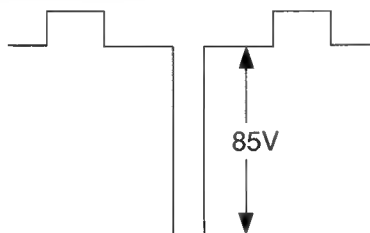


#### Screen (G2) setting

1. Input a 0 IRE (Black Level) signal from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 38.
3. Adjust SCREEN VR until the Down arrow is displayed.
4. Adjust SCREEN VR until the Down arrow just disappears.
5. Press the TV Button on the Remote Commander to store the data.

#### Drive Level

1. Input a Video signal containing a small area of 100% white on a black background.
2. Connect an oscilloscope to Pin 10 of J701 (R OUT) on the C Board.
3. Set the Picture to maximum using "Test""Test" and 01.
4. Enter into the Service mode (Adjust Menu).
5. Using the Blue and Green buttons select "RED HWB".
6. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform has an amplitude of 85V.

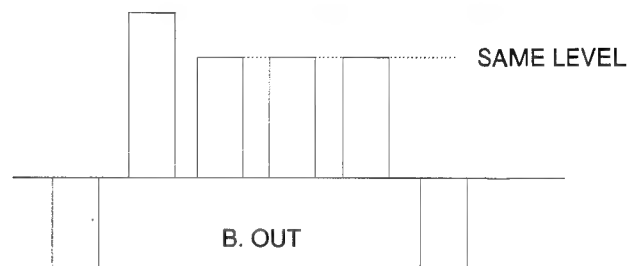


#### White Balance Adjustment

1. Input an all white pattern from the pattern generator.
2. Adjust the Colour and Brightness controls to the standard level.
3. Enter into the Service Mode.
4. Adjust the Green HWB and Blue HWB so that the White Balance becomes optimum.

#### Sub Colour Adjustment

1. Input a PAL colour bar pattern from the pattern generator.
2. Connect an oscilloscope to Pin 8 of J701 (B OUT) on the C Board.
3. Enter into the Service Mode "Test""Test" and 22.
4. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform becomes as follows :



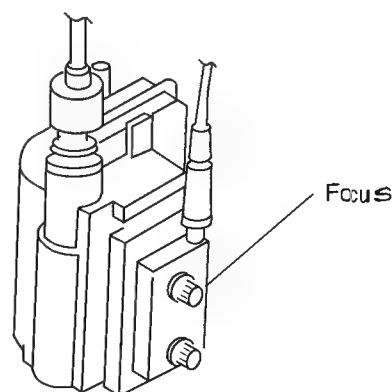
**Note :** If the TV is able to receive PAL and SECAM transmissions, repeat the above procedure using a Secam colour bar signal.

#### Sub Brightness Adjustment

1. Input a Philips pattern from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 23.
3. Using the Red and Yellow buttons on the Remote Commander adjust until the 0 IRE of the grey scale and the cut off are only slightly visible on the screen.

### 3-4. FOCUS

1. Receive a television broadcasting.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer to become the focus in the centre area properly.  
Bring only the centre area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.





## SECTION 4

### CIRCUIT ADJUSTMENTS

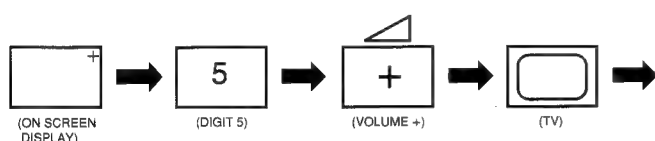
#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied Remote Control Commander RM-836.

Range of adjustments available from the on screen menu system.

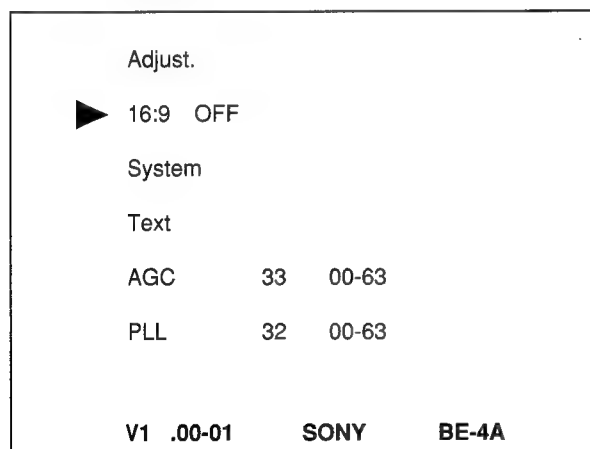
##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power of the set and enter into stand-by mode.
2. Press the following sequence of buttons on the Remote Control Commander.



"TT-- " will appear in the top right corner of the screen  
Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.



Software version

Adjustment	Set	Range
16:9 OFF	Select	ON/OFF
System	Select	BG-L, BG-DK UK, Eire, BG
Text	Select	EAST/WEST
AGC	Adj	00 - 63
PLL	Adj	00 - 63
B&W Delay	Adj	00 - 63
Ver Size	Adj	00 - 63
Ver, Breath	00	00 - 63
Par, Ampl	00	00 - 63
Par, Tilt	32	00 - 63
V, Linear	Adj	00 - 63
Corn, corr	00	00 - 63
V, Cen or EW	Adj	00 - 63
V, Position	42	00 - 63
H, Centre	Adj	00 - 63
Blue HWB	Adj	00 - 63
Green HWB	Adj	00 - 63
Red HWB	Adj	00 - 63

4. Press the Blue (Next) or Green (previous) buttons to select the adjustment item from the table.
5. Press the Yellow (+) or Red (-) buttons to change the data as required.
6. Turn off the power to quit the service mode when adjustments are completed.

## 4-2. TEST MODE 2:

TT -- Mode is available by pressing the Test button twice, O.S.D 'TT --' appears. The functions described below are available by pressing two digits. To release the 'TT --' mode, press 0 twice, press 'TEST' , press 'TV' or switch the TV into Stand-by mode.

00	Cancel test mode, return to normal viewing mode.
01	Set picture level maximum
02	Set picture level minimum
03	Set volume to 35% of maximum
04	Set volume to 50% of maximum
05	Set volume to 65% of maximum
06	Set volume to 80% of maximum
07	Enable Ageing condition
08	Set TV shipping conditions
09	No function
10	No function
11	Enable or disable the RGB input feature
12	Enable or disable the Text Contrast level offset
13	Select odd or even field for non-interlaced teletext
14	Select interlaced or non-interlaced teletext display
15	Copy the software default setting to the last power memory
16	No function
17	Enable or Disable the sharpness adjust feature
18	Enable or disable the teletext operation (SSA5291 only)
19	Enable or Disable the NTSC reception facility
20	No function
21	Sub Picture Adjustment
22	Sub Colour Adjustment (different stored locations for PAL & SECAM)
23	Sub Brightness Adjustment
24	Enable tuning for systems B/G/L
25	Enable tuning for systems B/G/D/K
26	Enable tuning for system I (UHF only)
27	Enable tuning for system I (VHF-L, VHF-H & UHF)
28	Enable tuning for system B/G
29	Sub brightness adjustment with picture at absolute zero

30	No function
31	Adjust the teletext & OSD Horizontal position (SSA5296 & SSA5498 only)
32	No function
33	Perform auto AGC adjustment
34	Perform auto PLL adjustment
35	Enable or Disable the auto standby feature
36	No function
37	Set Vertical size minimum and go to ZOOM1 mode
38	Enter G2 factory adjustment mode
39	Restore Vertical size and go to ZOOM3 mode
40	No function
41*	Write all default data to the NVM
42*	No function
43*	Write default geometry data to the NVM
44*	No function
45*	No function
46*	No function
47*	No function
48*	Write the NVM test byte as 44(hex)
49*	Write the NVM test byte as FF(hex)

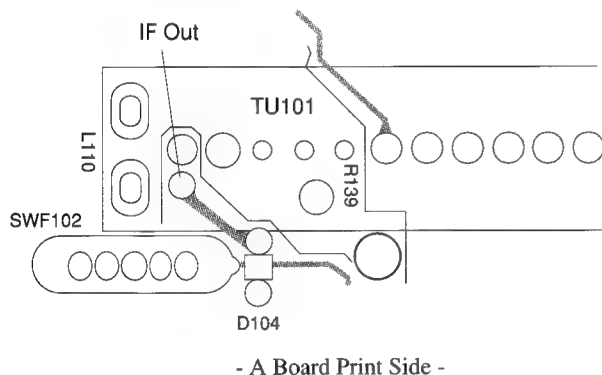
**Note :** \*= Programme number must be set to 59 in order to apply these functions

**IF ADJUSTMENT (AUTOMATIC)**

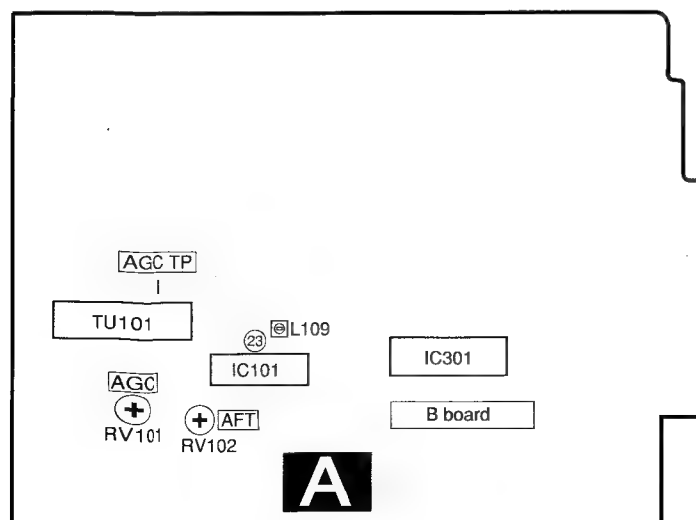
1. Input a 38.9 MHz 100dBμ CW signal at the IF Out injection point.
2. Enter into service mode and press 34.
3. Connect a digital voltmeter to IC101 pin (23).
4. Check AFT 2.5V  $\pm$ 0.3V dc.
5. Press '00' on the Remote Commander.

**SYSTEM L ADJUSTMENT ( French Models)**

1. Input a 33.9MHz 100dBμ CW signal at the IF Out injection point.
2. From the On Screen Menu set System to L band 1.
3. Connect a digital voltmeter to IC101 pin (23).
4. Adjust RV102 AFT for 2.5V  $\pm$ 0.3V dc.

**AGC ADJUSTMENT**

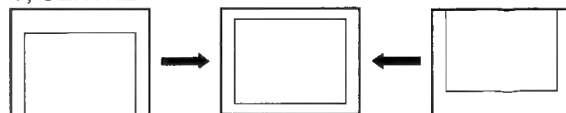
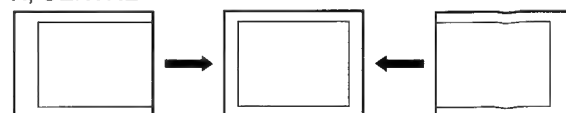
1. Receive an off-air signal.
2. Enter into the Service adjust menu and select AGC.
3. Adjust the data using the Red and Yellow buttons on the Remote Commander so that there is no snow or cross - modulation visible on the screen.
4. Change the receiving off-air channel, and confirm the above status.

**DEFLECTION SYSTEM ADJUSTMENT**

1. Enter into the service mode.
2. Using the Blue or Green buttons select the Adjust item.
3. Press the Yellow button to enter the adjustment submenu.
4. Select and adjust each item in order to obtain the optimum image.

See Note on page 22

Adjustment	Set	Range
VERT, AMPL	Adj	00 - 63
VER, BREATH	00	00 - 63
PAR, AMPL	00	00 - 63
PAR, TILT	32	00 - 63
V, LINEAR	Adj	00 - 63
CORN, CORR	Adj	00 - 63
V, CENTRE	Adj	00 - 63
V, POSITION	42	00 - 63
H, CENTRE	Adj	00 - 63

**VERT, AMPL****V, LINEAR****V, CENTRE****H, CENTRE**

Fit the link as required to obtain the correct horizontal picture size.

### 4-3. BE-4A SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-4A chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to I<sup>2</sup>C. In the event of one of these situations arising the software will first try to release the Bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each relevant device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED by a Series of flashes which must be counted (See Table 1)., on fatal errors are reported with this method.

If a fatal error is found, the set will simply stay in whichever state it was when the error occurred, but if a non fatal error occurs the set will try to continue to operate.

**Table 1**

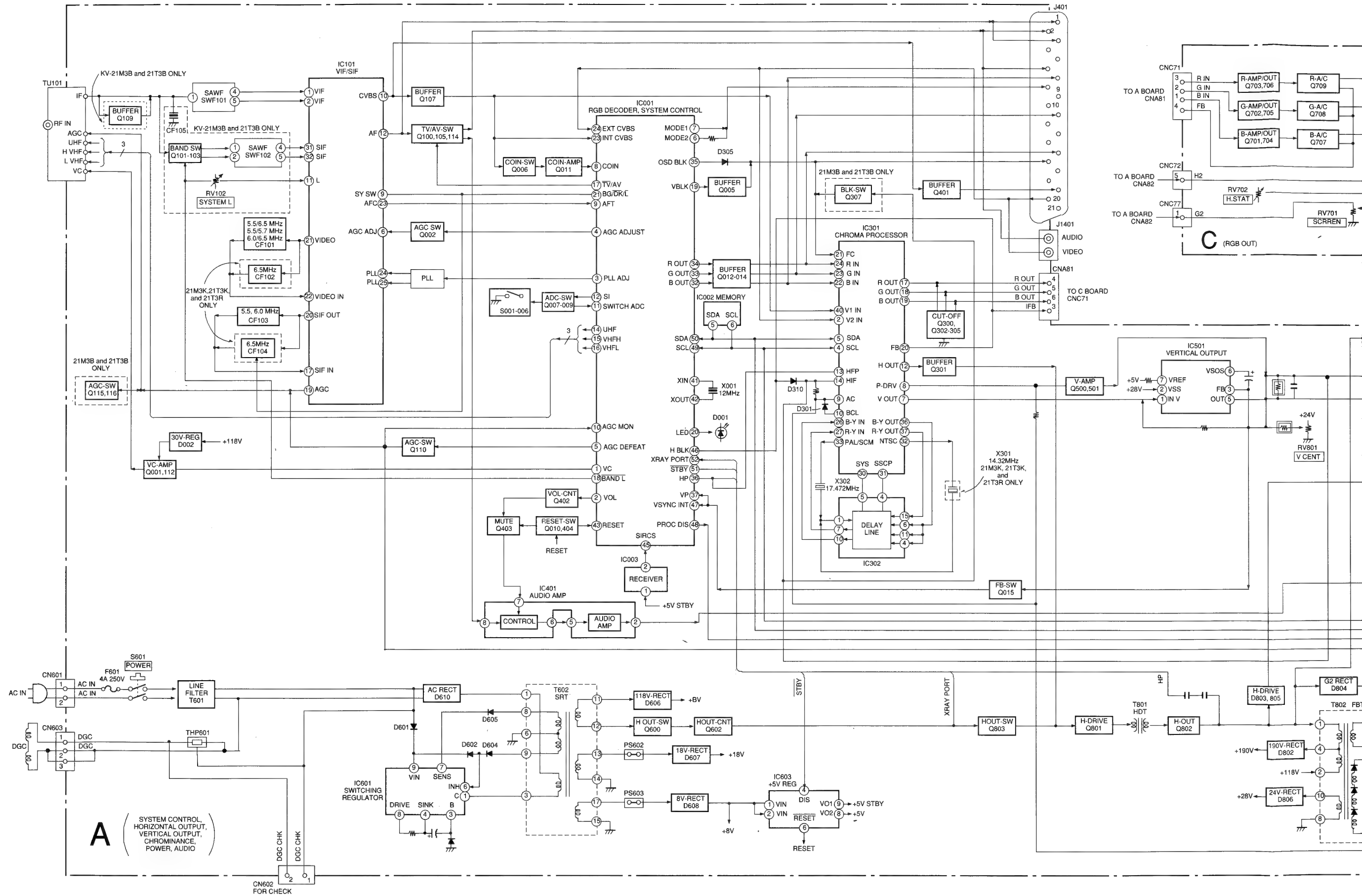
No. of Flashes	Meaning
2	IC301 not acknowledging I <sup>2</sup> C transmission, NVM OK.
3	IC301 FAULT (Not OK) - flags
4	IC301 - No H Flyback
5	IC301 - Stack Overflow
6	Overvoltage / Overcurrent Protection (Pin 52) high.
7	IC002 not acknowledging I <sup>2</sup> C transmission, IC301 OK.
8	IC002 and IC301 - No I <sup>2</sup> C acknowledgement
9	General I <sup>2</sup> C Error (SDA or SCL being held low ) (IC301, IC001, IC002, CN001)

Flash Timing Example : e.g. error number 3

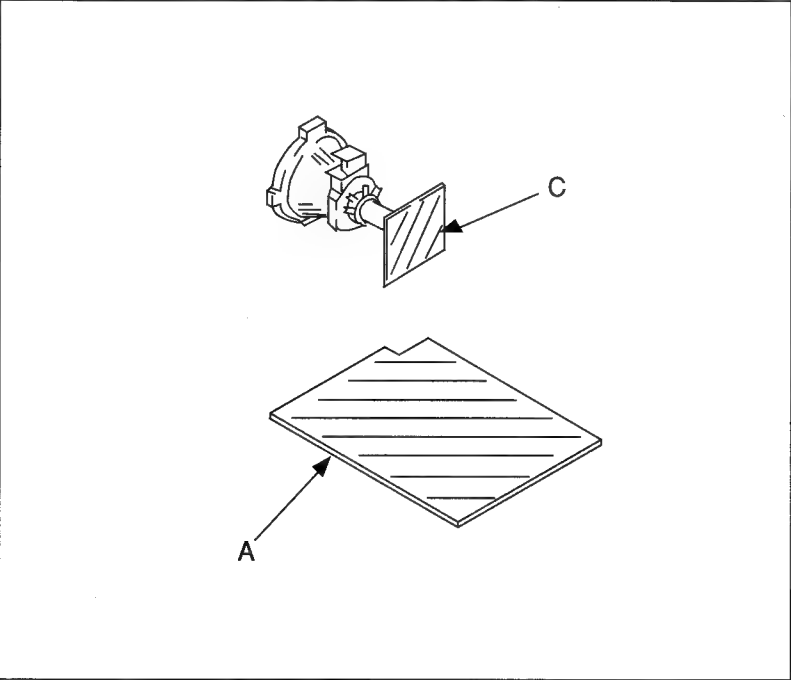
Stby LED



**Note :** Deflection System Adjustments should not be carried out whilst using an NTSC (60Hz) signal, or if the signal is unlocked.



5-2. CIRCUIT BOARDS LOCATION







5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS


Note :

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $k = 1000$  ,  $M = 1000K$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm  
Rating electrical power  $\frac{1}{4}$  W



-  : nonflammable resistor.
-  : internal component.
-  : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$  : earth - ground.
- $\text{///}$  : earth - chassis.
- $\text{---}$  : no mounted.

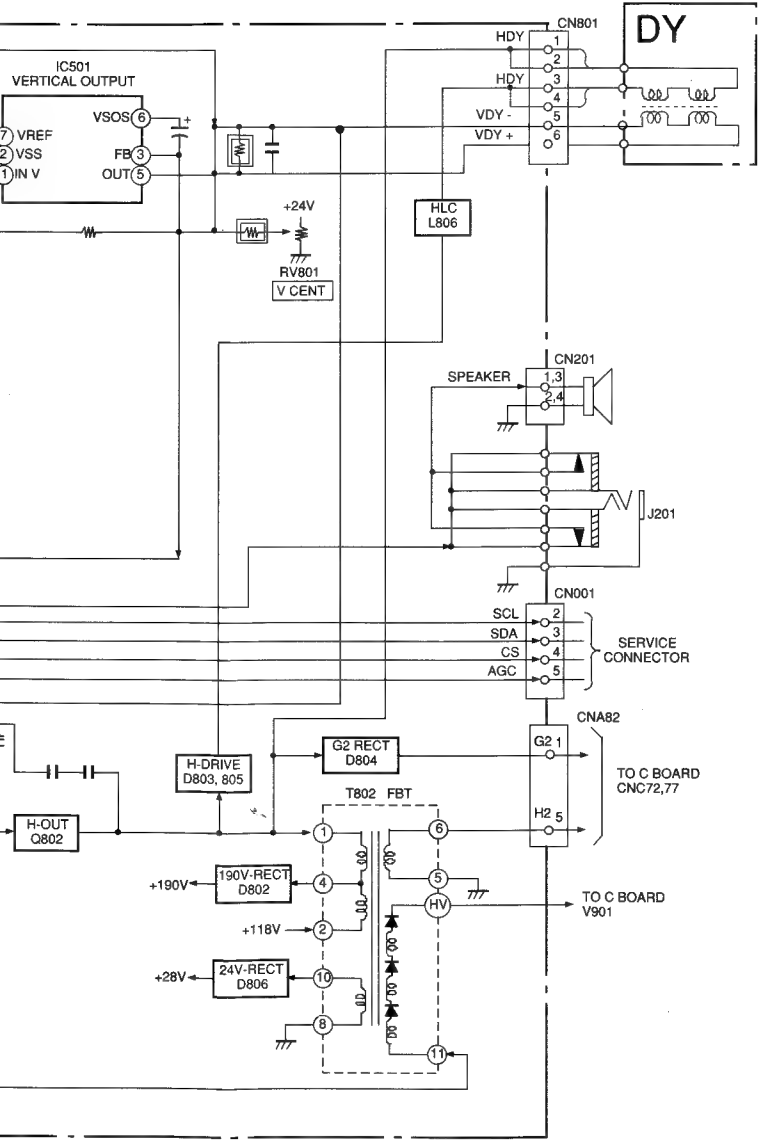
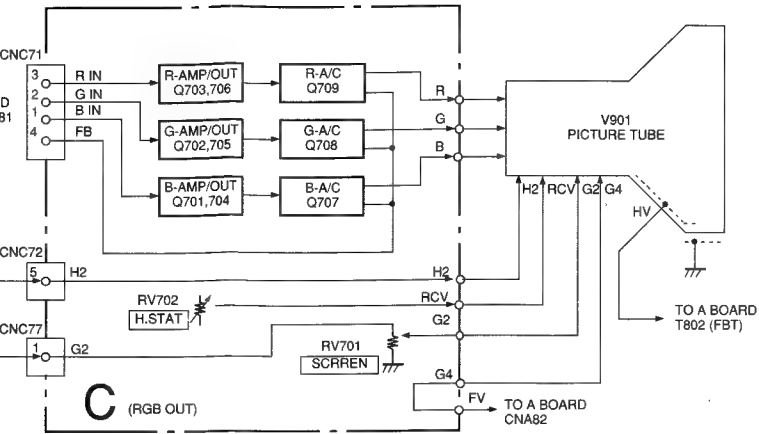
**Note :** The components identified by shading and marked  are critical for safety. Replace only with the part number specified.

**Note :** Les composants identifiés par une trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: $\times$	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
	: TA	TANTALUM
CAPACITOR	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

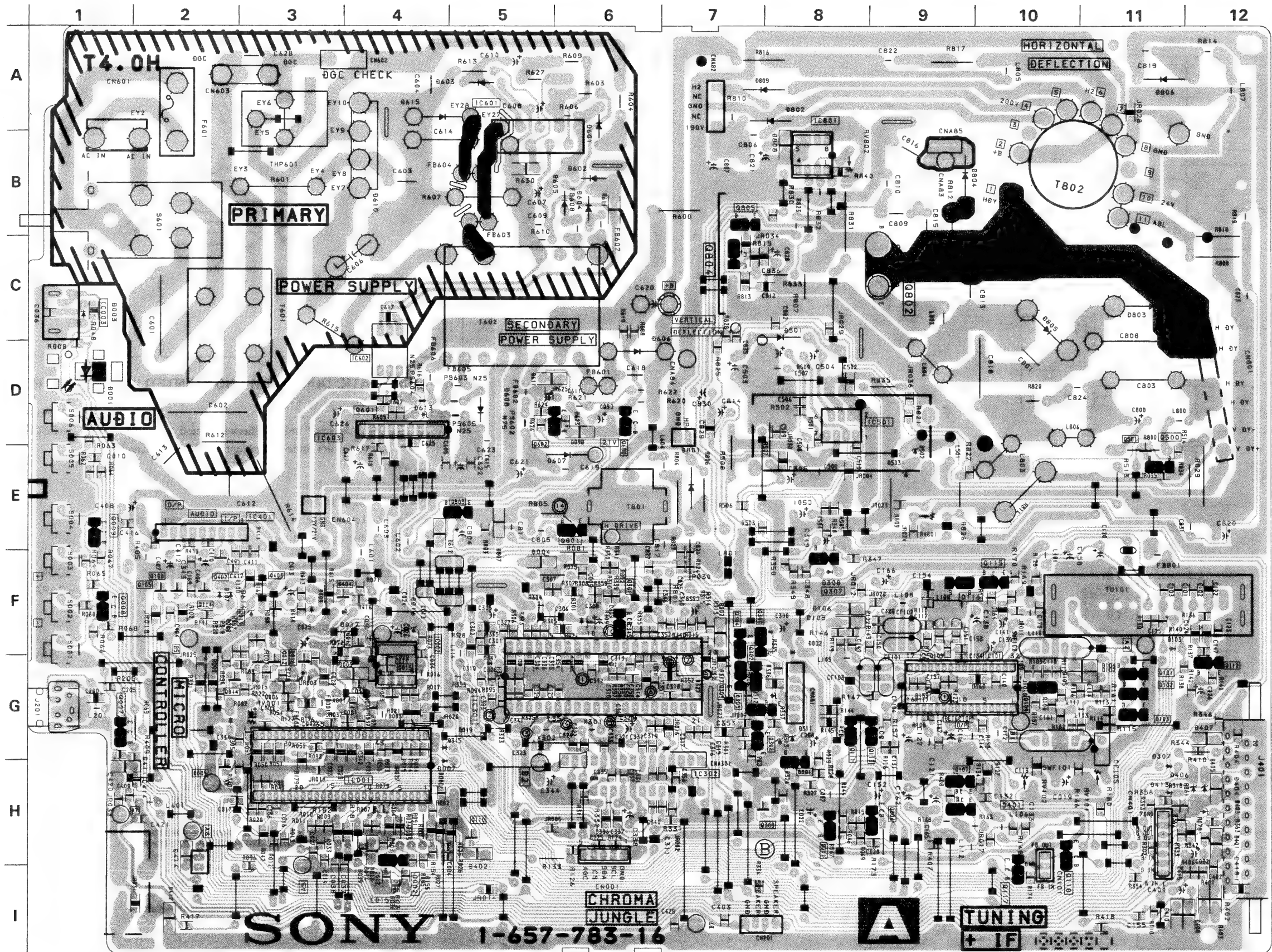
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
-  : B+ bus.
-  : signal path. (RF)





**A**SYSTEM CONTROL, HORIZONTAL OUTPUT,  
VERTICAL OUTPUT, CHROMINANCE,  
POWER, AUDIO**A BOARD**

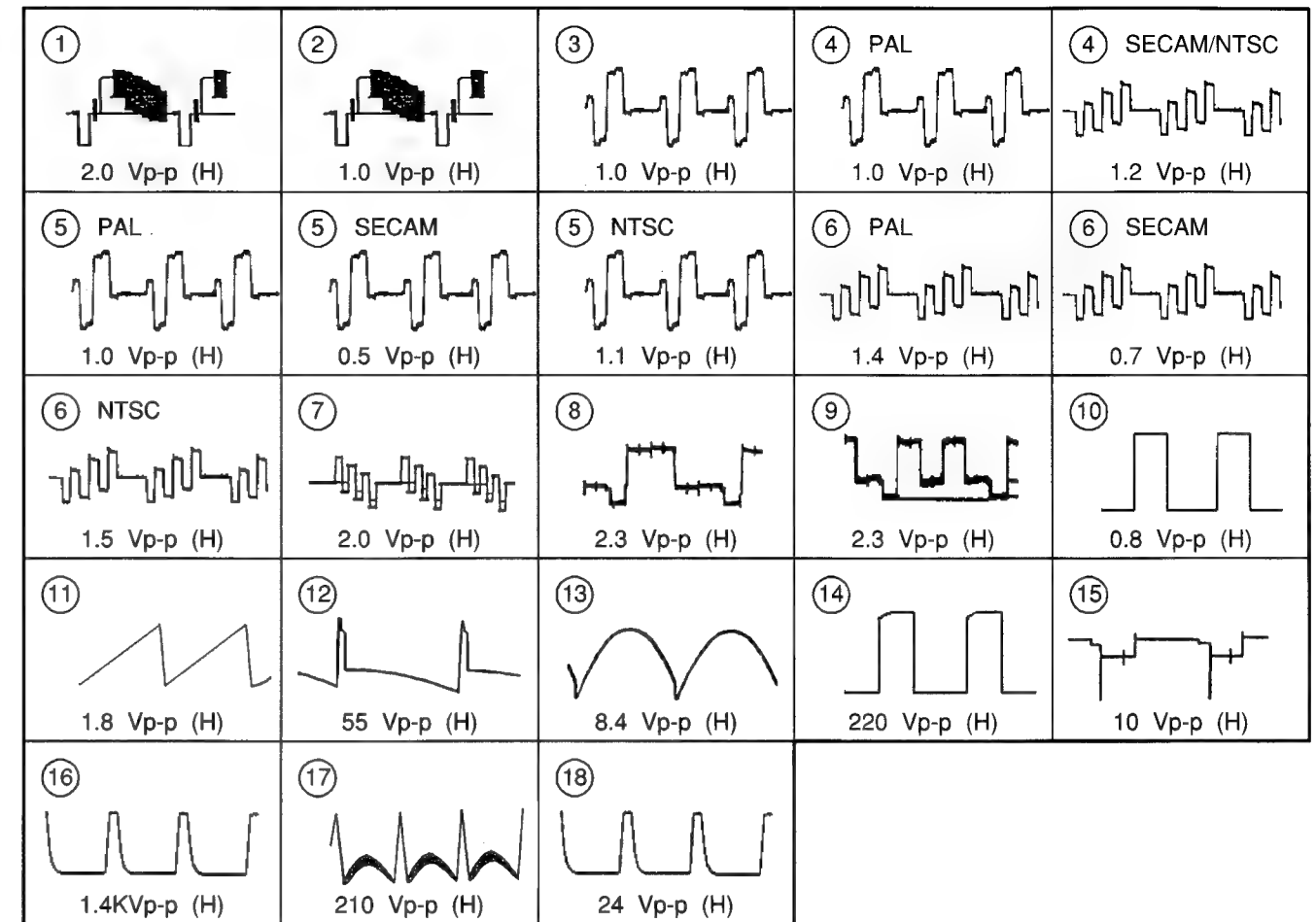
IC		Q303	G-7	D401	H-12
IC001	H-4	Q304	F-7	D402	H-5
IC002	G-4	Q305	G-7	D403	H-12
IC003	C-1	Q306	G-8	D404	H-12
IC101	G-10	Q307	F-8	D405	H-12
IC301	G-5	Q308	H-7	D406	H-11
IC302	H-7	Q401	H-10	D407	G-12
IC401	E-3	Q402	F-2	D408	I-12
IC501	D-9	Q403	F-3	D409	F-3
IC601	A-5	Q404	F-4	D410	I-11
IC603	D-3	Q600	D-6	D412	I-2
TRANSISTOR		Q602	D-6	D414	H-2
Q001	H-8	Q801	E-6	D501	D-8
Q002	I-4	Q802	C-9	D600	D-6
Q005	H-2	Q803	E-5	D601	A-6
Q006	H-9	Q804	C-7	D602	B-6
Q007	G-1	Q805	B-7	D603	A-5
Q008	F-1	DIODE		D604	B-6
Q009	E-1	D001	D-1	D605	B-6
Q011	H-8	D002	F-8	D606	D-6
Q012	G-3	D003	C-1	D607	E-6
Q013	F-3	D004	F-5	D608	D-5
Q014	G-2	D005	G-4	D610	B-4
Q015	G-4	D006	G-3	D611	D-6
Q016	G-3	D007	H-4	D612	B-5
Q100	F-2	D014	I-4	D613	E-3
Q101	G-11	D016	G-4	D614	F-3
Q102	G-11	D017	F-4	D801	E-7
Q103	G-11	D100	F-3	D802	A-8
Q105	F-2	D102	G-11	D803	C-11
Q107	H-9	D104	G-11	D805	C-10
Q109	G-10	D105	F-8	D806	A-11
Q110	H-5	D106	F-8	D807	E-5
Q111	G-8	D107	F-2	D809	A-8
Q112	G-12	D109	G-9	VARIABLE	
Q113	G-9	D301	F-6	RESISTOR	
Q114	F-2	D302	F-7	RV102	H-10
Q115	F-10	D305	G-2	RV801	E-9
Q116	F-9	D307	H-11		
Q300	F-7	D308	F-8		
Q301	F-6	D310	F-5		
Q302	F-7	D315	G-5		

**A BOARD**

## A BOARD \*MARK

	21M1A/21T1A	21M1B/21T1B	21M1D/21T1D	21M1E/21T1E	21M1K/21T1K	21M1L/21T1L	21T1R	21M1U/21T1U
C16				Refer to "A board	* mark-2" table			
C17				Refer to "A board	* mark-2" table			
C112	—	0.1MF	—	—	—	—	—	—
C113	—	—	0.01MF	—	—	—	—	—
C114	0.22MF	0.1MF	0.22MF	0.22MF	0.22MF	0.22MF	0.22MF	0.22MF
C116	2.2MF	2.2MF	—	—	—	—	—	—
C120	1000MF	1000MF	470MF	470MF	470MF	470MF	470MF	470MF
C131	—	—	—	—	0.001MF	—	0.001MF	—
C134	7PF	7PF	7PF	7PF	—	—	—	—
C151	—	—	—	—	0.001MF	0.001MF	0.001MF	0.001MF
C153	—	—	—	—	15PF	15PF	15PF	15PF
C164	—	1MF	—	—	—	—	—	—
C205	0.0047MF	0.0047MF	0.0047MF	0.0047MF	—	—	—	—
C306	0.082MF 50V	0.082MF 100V	0.082MF 50V	0.082MF 50V	0.082MF 50V	0.082MF 50V	0.082MF 50V	0.082MF 50V
C322	—	—	—	—	18PF	—	18PF	—
C416	0.0047MF	0.0047MF	0.0047MF	0.0047MF	—	—	—	—
CF101	5.5/5.74MHz	5.5/6.5MHz	5.5/5.74MHz	5.5/5.74MHz	5.5/5.74MHz	6.0/6.5MHz	5.5/5.74MHz	6.0/6.5MHz
CF102	—	—	—	—	6.5MHz	—	6.5MHz	—
CF103	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz	5.5MHz	6.0MHz
CF104	—	—	—	—	6.5MHz	—	6.5MHz	—
CF105	—	5.5MHz	—	—	—	—	—	5.5MHz
CN201	3P	3P	3P	3P	4P	3P	4P	3P
CN602	2P	2P	2P	2P	—	—	—	—
D105	—	—	—	—	1SS133T-77	—	1SS133T-77	—
D106	—	—	—	—	1SS133T-77	—	1SS133T-77	—
D109	—	—	—	—	1SV214-TPH3	1SV214-TPH3	1SV214-TPH3	1SV214-TPH3
IC001				Refer to "A board	* mark-2" table			
IC002				Refer to "A board	* mark-2" table			
IC101	TDA9806	TDA9812	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806
IC301	MC44007P	MC44002P	MC44002P	MC44007P	MC44002P	MC44007P	MC44002P	MC44007P
JR011	—	0 : CHIP	—	—	—	—	—	—
L108	8.2μH	8.2μH	8.2μH	8.2μH	4.7μH	8.2μH	4.7μH	8.2μH
Q111	—	—	—	—	DTC144ES-TP	—	DTC144ES-TP	—
Q113	—	—	—	—	DTC144ES-TP	—	DTC144ES-TP	—
Q308	—	DTC144EK-T146	DTC144EK-T146	—	DTC144EK-T146	—	—	—
R006	47K	33K	33K	47K	33K	47K	33K	47K
R122	150	150	150	150	100	150	100	150
R134	180	180	180	180	180	150	180	150
R143	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	—	0 : CHIP	—	0 : CHIP
R144	—	—	—	—	2.2K	—	2.2K	—
R145	—	—	—	—	2.2K	—	2.2K	—
R147	—	—	—	—	560	—	560	—
R149	—	—	—	—	2.2K	—	2.2K	—
R151	—	—	—	—	100K	100K	100K	100K
R153	—	—	—	—	100K	100K	100K	100K
R157	—	1K	—	—	—	—	—	—
R158	390	180	390	390	390	390	390	390
R161	0 : CHIP	—	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP
R162	—	47	—	—	—	—	—	—
R180	—	1K	—	—	—	—	—	—
R326	—	82K	82K	—	82K	—	82K	—
R327	—	100K	100K	—	100K	—	100K	—
R351	—	8.2M	8.2M	—	8.2M	—	8.2M	—
R401	1K	1K	1K	1K	470	470	470	470
R410	75	75	75	75	75	68	75	68
R506	20K 0.5%	20K 0.5%	20K 0.5%	20K 0.5%	20K 5%	20K 5%	20K 5%	20K 5%
RV102	—	22K	—	—	—	—	—	—
SWF101	OPWG1963	OFWK3953	OPWG1963	OPWG1963	OFWK2950	OFWJ1952M	OFWK2950	OFWJ1952M
TU101	BT-AU601	TEL4-002B	TEL4-002B	BT-AU601	BT-AC401	UV1315	TEL4-002B	BT-AU601
X301	—	—	—	—	14.32MHz	—	14.32MHz	—

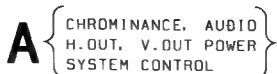
## WAVEFORMS A BOARD

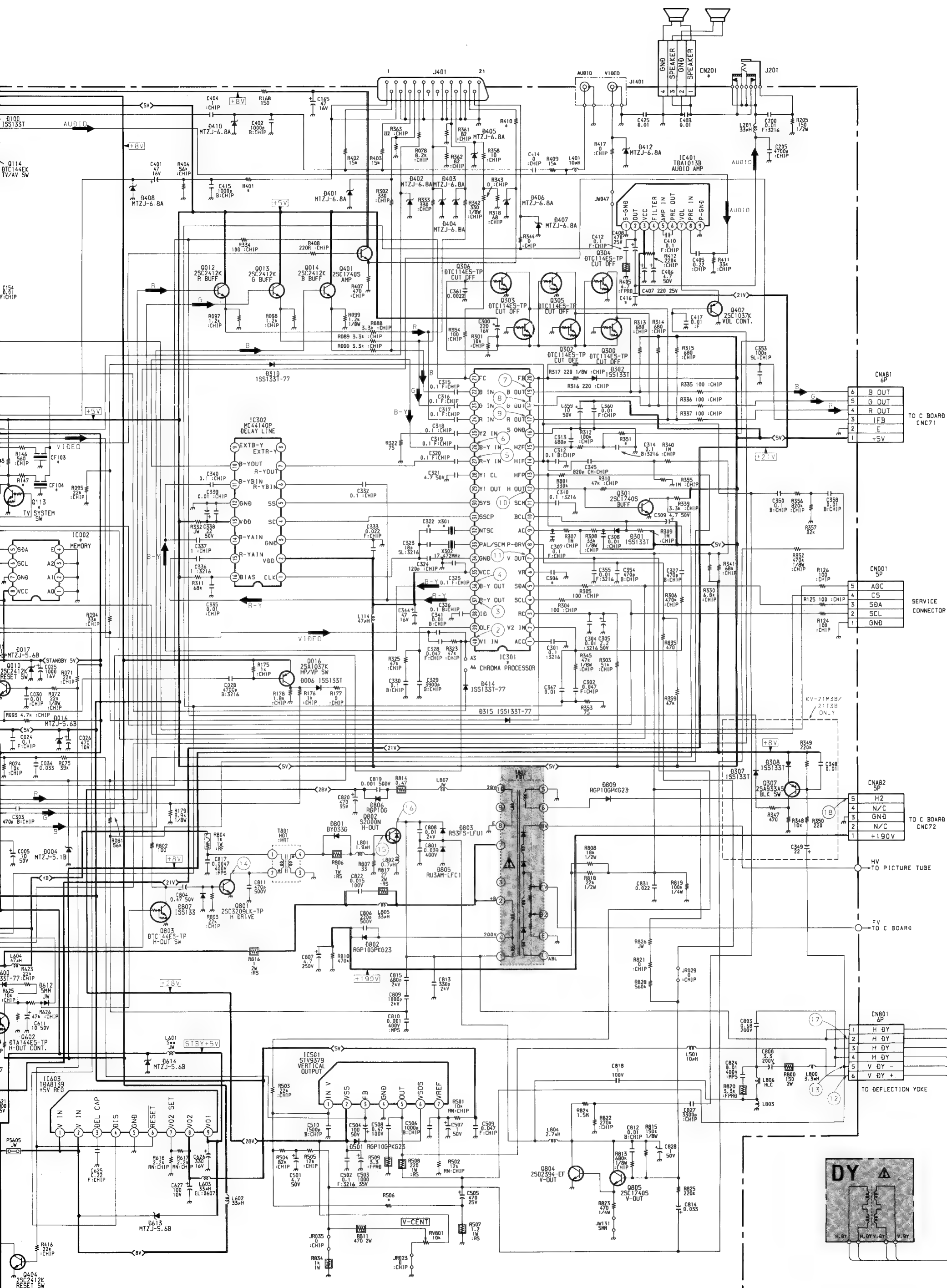


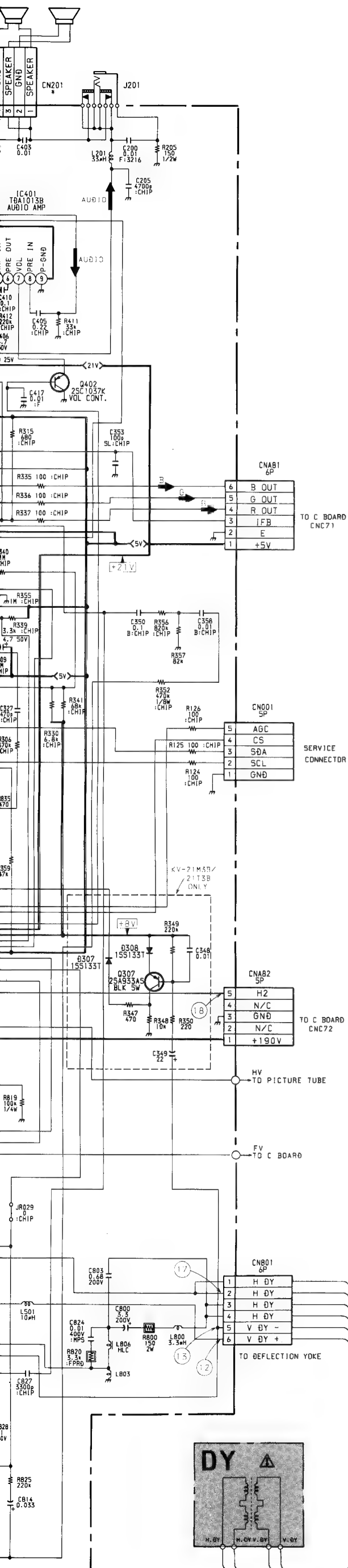
## A BOARD \*MARK-2

C16	0.1MF	KV-21T3A/21T3B/21T3D/21T3E/21T3K/21T3L/21T3R/21T3U
C17	0.1MF	KV-21T3A/21T3B/21T3D/21T3E/21T3K/21T3L/21T3R/21T3U
IC001	SAA5288ZP/M1/025	KV-21M3A/21M3B/21M3D/21M3E/21M3K/21M3L/21M3U
IC001	SAA5498ZP/M1/014	KV-21T3A/21T3B/21T3E/21T3K/21T3L/21T3U
IC001	SAA5498ZP/M1/016	KV-21T3D
IC001	SAA5498ZP/M1/015	KV-21T3R
IC002	ST24C04FB6	KV-21M3A/21T3A/21M3B/21T3B/21M3D/21T3D/21M3E/21T3E/21M3K/21M3L/21T3L/21T3R/21M3U/21T3U
IC002	ST24C02FB6	KV-21T3K









### A BOARD IC VOLTAGE TABLE

IC Voltage Table			IC Voltage Table			IC Voltage Table			IC Voltage Table		
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC001	1	0.7	IC002	5-6	5.0	IC301	18	2.1	IC501	1	2.7
	2	0	IC003	1-2	5.0		19	2.0		3	1.2
	3	2.8	IC101	1-2	3.3		20	3.4		5	18.0
	4	0		3	0.6		21	0		6	26.0
	6	0		6	1.0		22-24	3.0		7	2.7
	7	2.0		7-8	2.5		25-27	3.1	IC601	1	333.0
	8	5.1		9	5.0		28	0.9		2-3	0
	9	3.0		10	2.2		30	0		4	0.4
	11	1.6		11	4.0		31	1.3		5	0
	12	5.0		12-14	2.4		33	2.0		6	1.5
	14	4.1		15	2.0		34	0		7	31.6
	15-16	0.1		17	2.6		36	2.6	8	0.3	
	17	0		19	1.8		37	2.3	9	8.1	
	18	4.3		20-21	2.0		38	1.0	IC603	3	3.0
	19	0		22	0		39	2.0		4	5.0
	20	4.0		23	3.0		40	3.0		6	2.1
	21	5		24-25	2.6	IC302	1	1.5		7	2.5
	23	2.3	26	2.4	3		0				
	24	0	28	3.0	4		1.3				
	25	2.1	31-32	3.2	5		0				
	26	2.4	IC301	1	0.5		6-7		1.5		
	30-31	5.0		2	0.8		10-11		1.4		
	32-35	0		3	1.3		12		0		
	36	0.3		4-5	5.0		14		1.1		
	37	0.2		6	0.9		15		1.2		
	40	0		7	2.3		16		1.5		
	41	2.0		8	0.6	IC401	2		8.8		
	42	2.5		9	1.2		4	18.0			
	43	0		10	2.5		5	1.3			
	44	5.0		11	2.3		6	6.7			
	45	3.4		12	0.4		7	2.0			
	46	0		13	0.5	8	2.8				
47	0.2	14		0.2							
48	2.5	15		2.0							
49-51	5.0	16		0							
52	0.1	17	2.2								

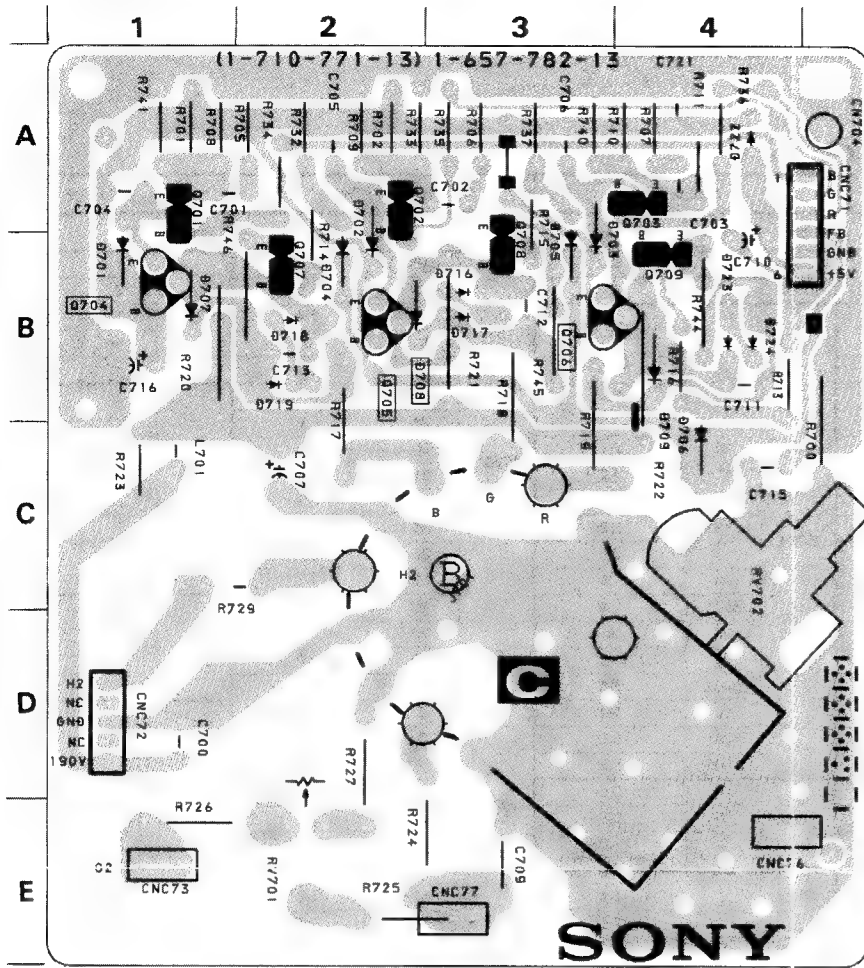
### A BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q001	0.2	13.5	-
Q005	0	5.0	0
Q006	4.7	0.6	5.0
Q007	0.6	0	-
Q008	0	5.1	4.5
Q009	5.0	5.1	4.5
Q010	0.6	0	-
Q011	5.0	5.0	-
Q012	0	5.0	0
Q013	0	5.0	0
Q014	0	5.0	0
Q100	0	2.0	-
Q101	4.3	0	-
Q102	4.3	0	-
Q103	0	4.7	-
Q105	0	2.7	-
Q107	3.0	7.7	2.1
Q112	0.6	2.2	-
Q114	2.0	0	-
Q300	-	2.0	0
Q301	0.3	0.6	0
Q302	0	2.1	0
Q303	0	2.2	0
Q304	0	2.0	-
Q305	0	2.1	-
Q306	0	2.2	-
Q307	11.6	0.3	8.6
Q401	2.2	8.0	1.6
Q402	1.3	-	2.0
Q403	0	1.3	-
Q404	0.5	0	-
Q600	1.0	0.4	0.4
Q602	0.4	8.4	8.4
Q801	0	105.0	-
Q802	-0.2	120.0	0
Q803	0.1	0.6	-

**C**

[ R,G,B OUT ]

**C BOARD**



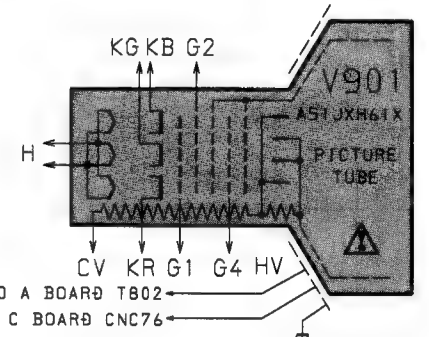
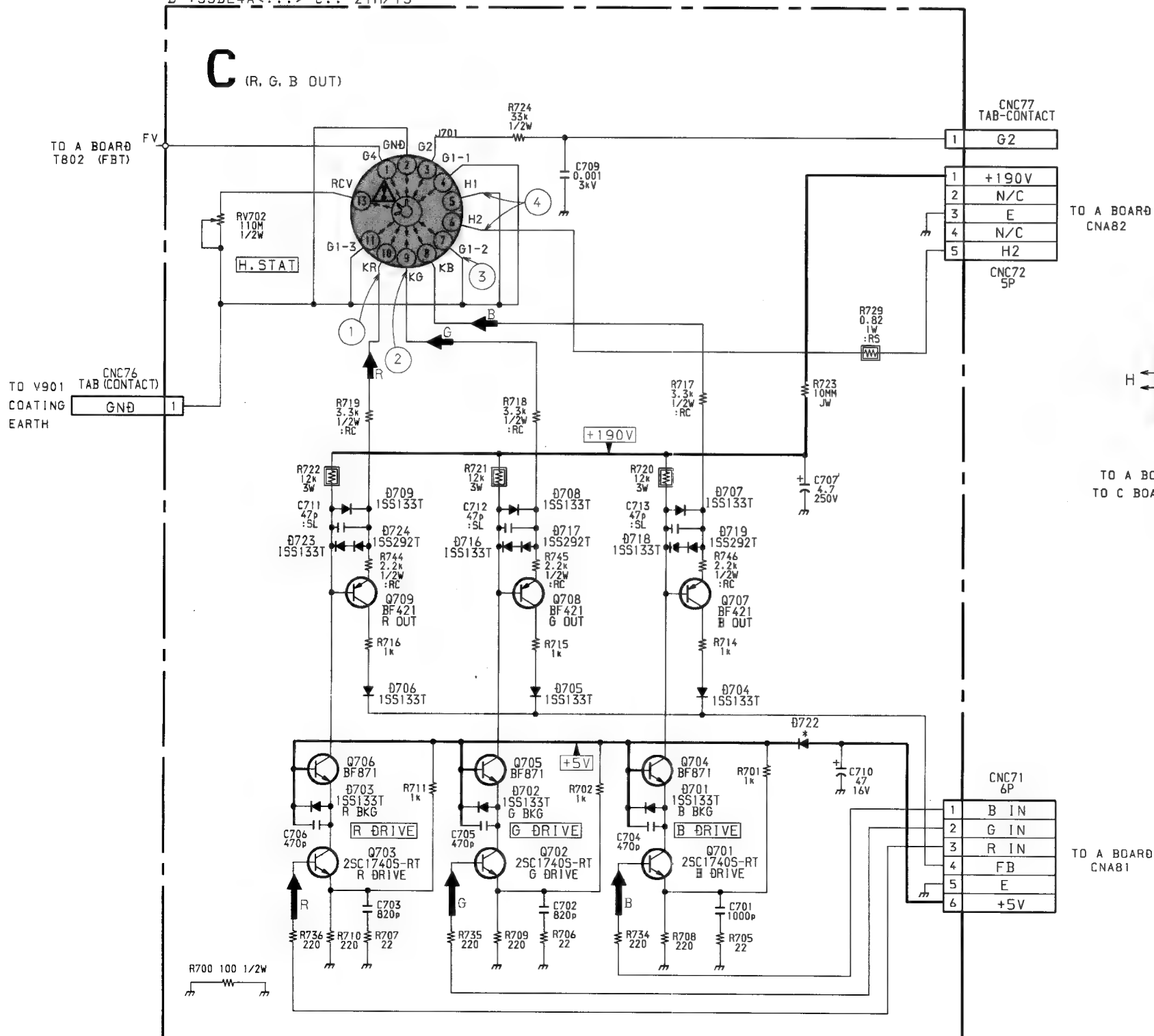
**C BOARD  
TRANSISTOR VOLTAGE TABLE**

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q701	2.1	-	1.5
Q702	2.1	-	1.5
Q703	2.1	-	1.5
Q704	5.0	154.8	4.25
Q705	5.0	149.3	4.25
Q706	5.0	150.2	4.25
Q707	155.3	3.4	153.8
Q708	149.7	3.3	148.2
Q709	151.0	3.3	146.5

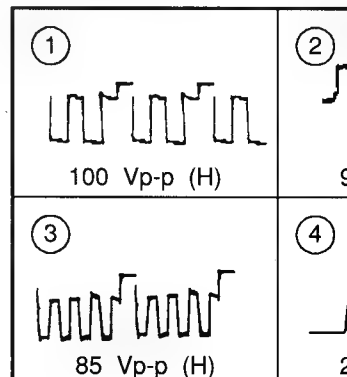
**C BOARD \*MARK**

	21M1A/21T1A	21M1B/21T1B	21M1D/21T1D	21M1E/21T1E	21M1K/21T1K	21M1L/21T1L	21T1R	21M1U/21T1U
D722	ISS133T-77	ISS133T-77	ISS133T-77	ISS133T-77	-	-	-	-

B-:SSBE4A<...>-C...-21M/T3

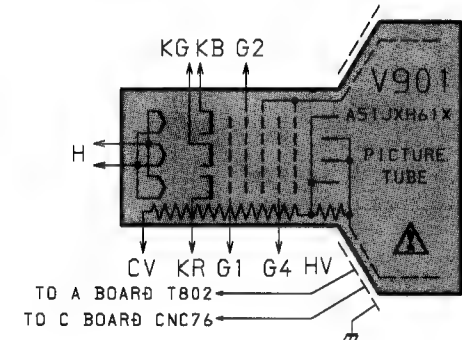


**WAVEFORMS C BOARD**

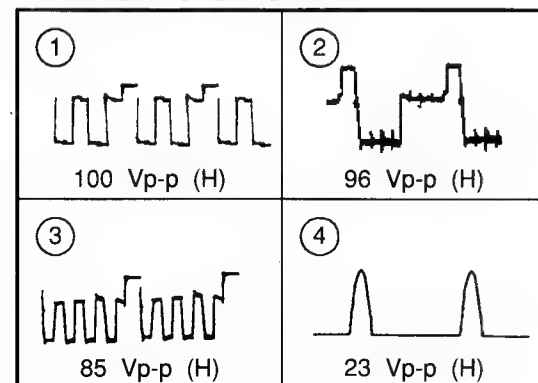


21M1L/21T1L	21T1R	21M1U/21T1U
-	-	-

TO A BOARD  
CNAB2

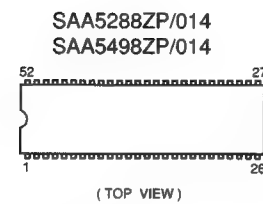
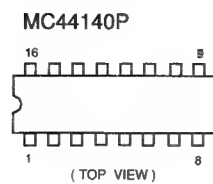
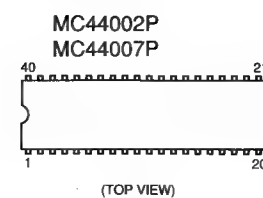


#### WAVEFORMS C BOARD

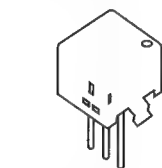


TO A BOARD  
CNAB1

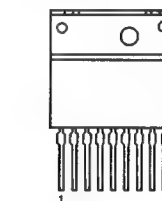
#### 5-4. SEMICONDUCTORS



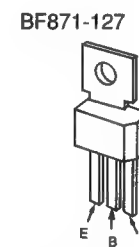
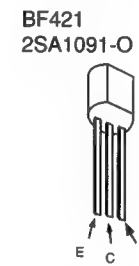
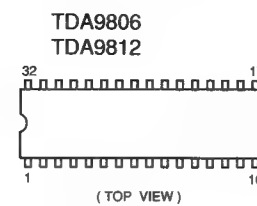
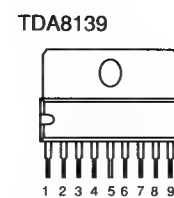
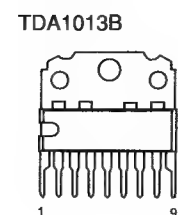
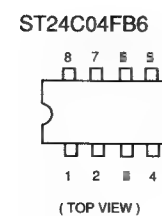
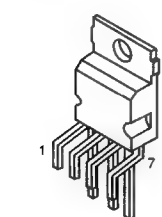
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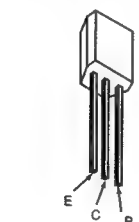
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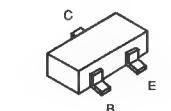
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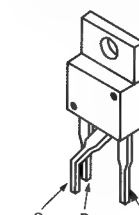
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DTC144ES



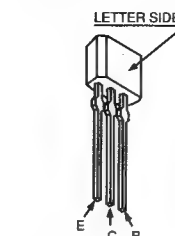
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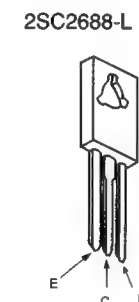
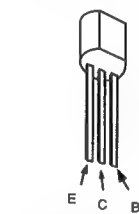
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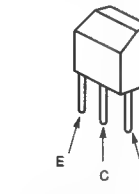
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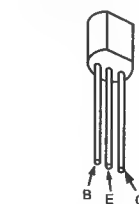
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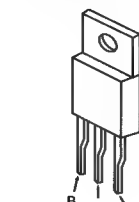
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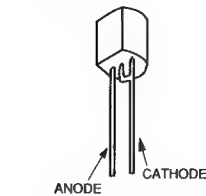
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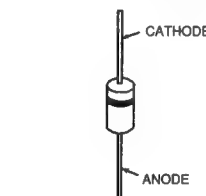
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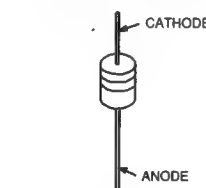
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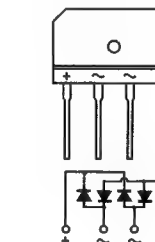
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EL1Z RGP10GPKG23  
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ERC06-15S RU3AM  
ERD28-06S 1SS168  
ERD28-08S 1SS238



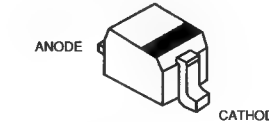
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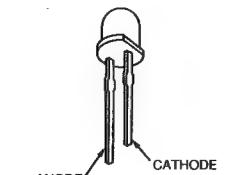
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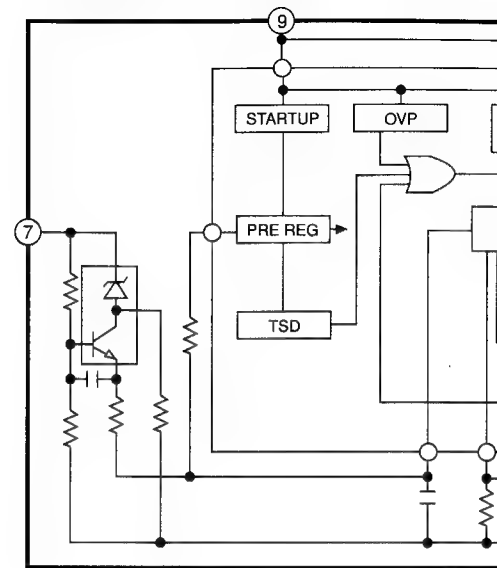


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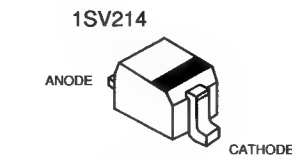
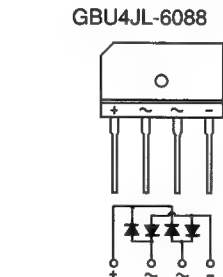
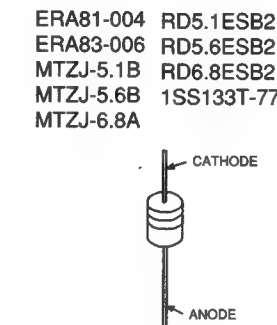
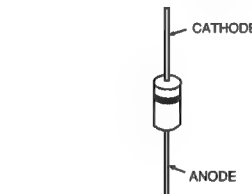
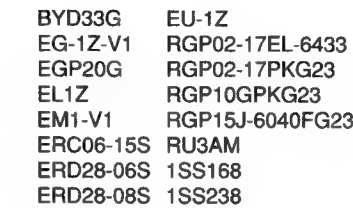
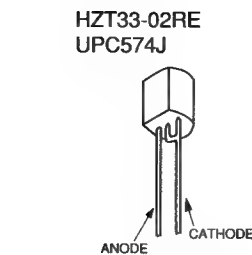
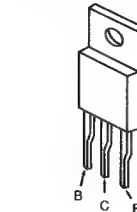
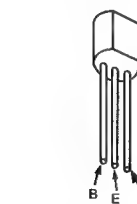
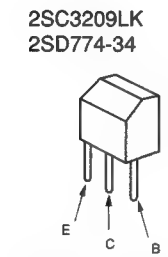
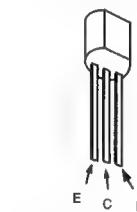
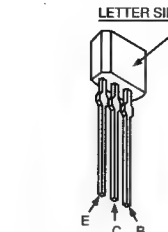
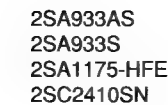
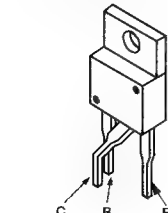
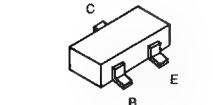
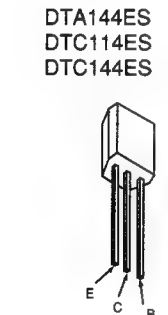
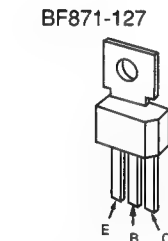
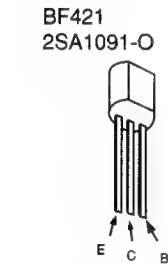
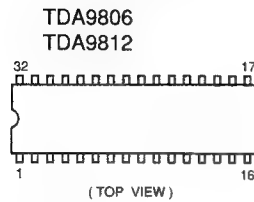
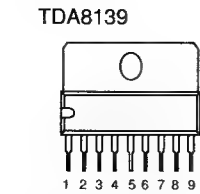
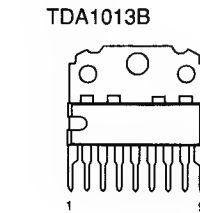
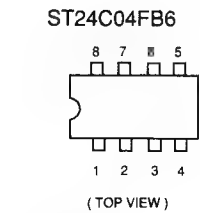
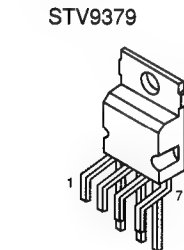
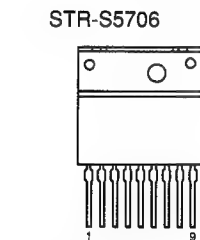
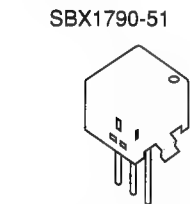
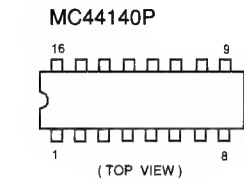
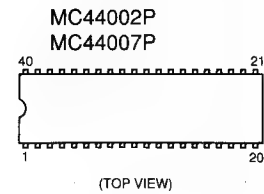
#### 5.5 IC BLOCK DIAGRAMS

A BOARD IC601 STRS5706

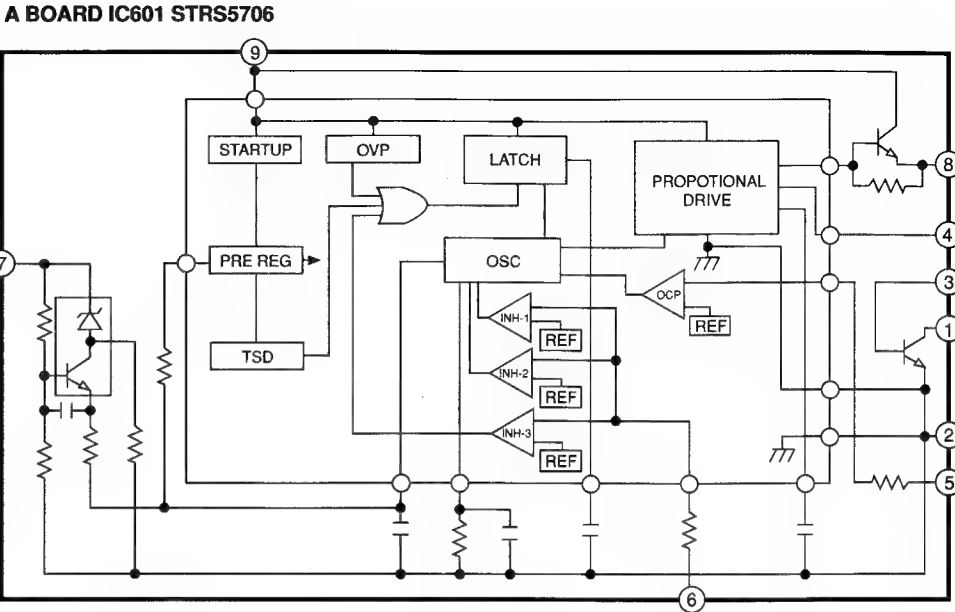




5-4. SEMICONDUCTORS



5.5 IC BLOCK DIAGRAMS



## SECTION 6

### EXPLODED VIEWS

**NOTE :**

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ! are critical for safety.

Replace only with the part number specified.

Les composants identifiés par une trame et une marque ! sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

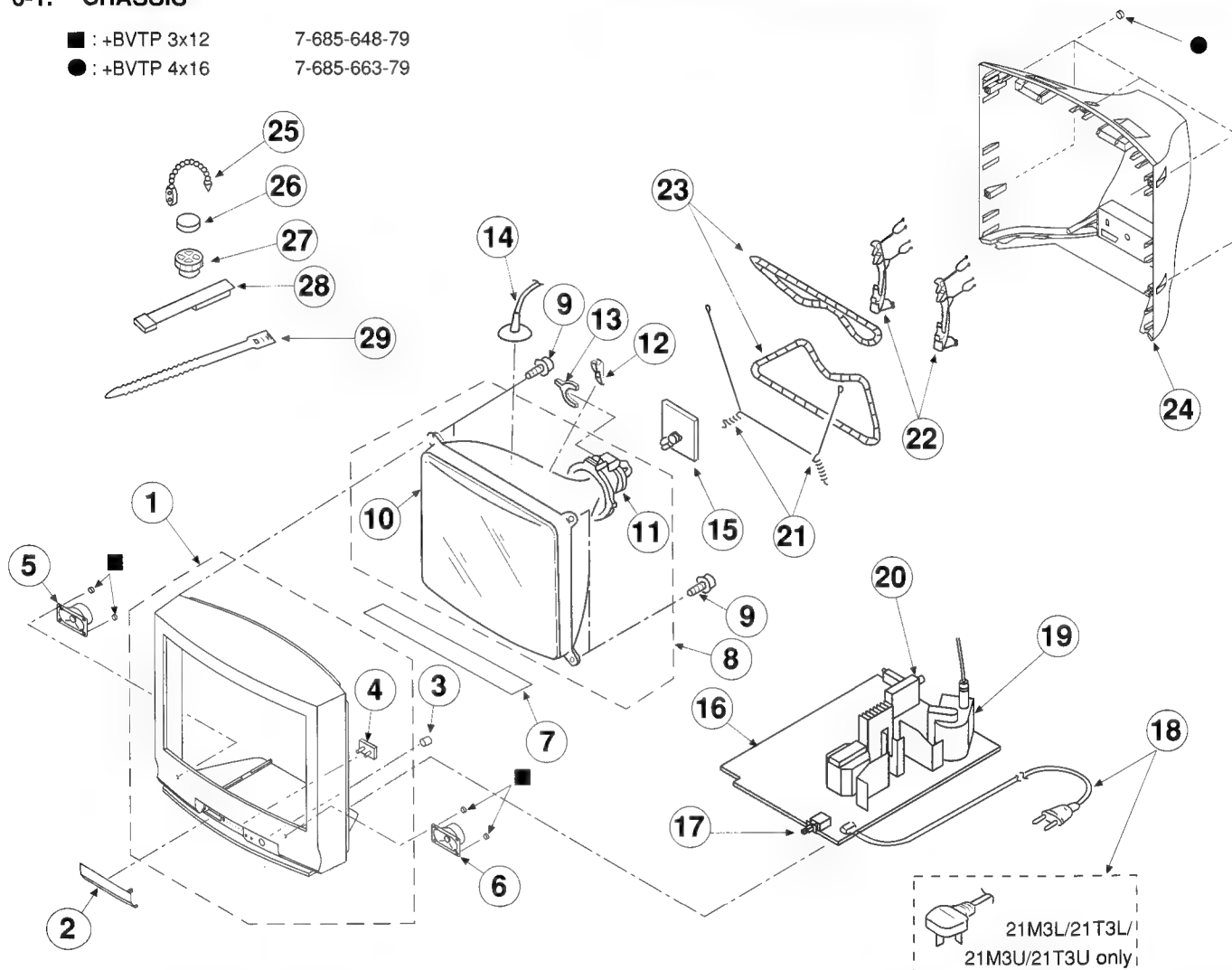
**6-1. CHASSIS**

■ : +BVTP 3x12

7-685-648-79

● : +BVTP 4x16

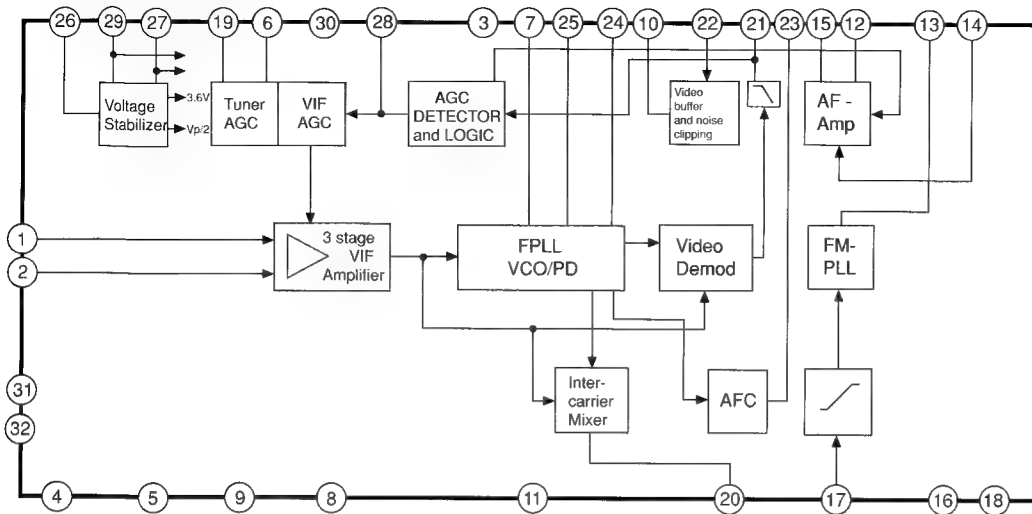
7-685-663-79



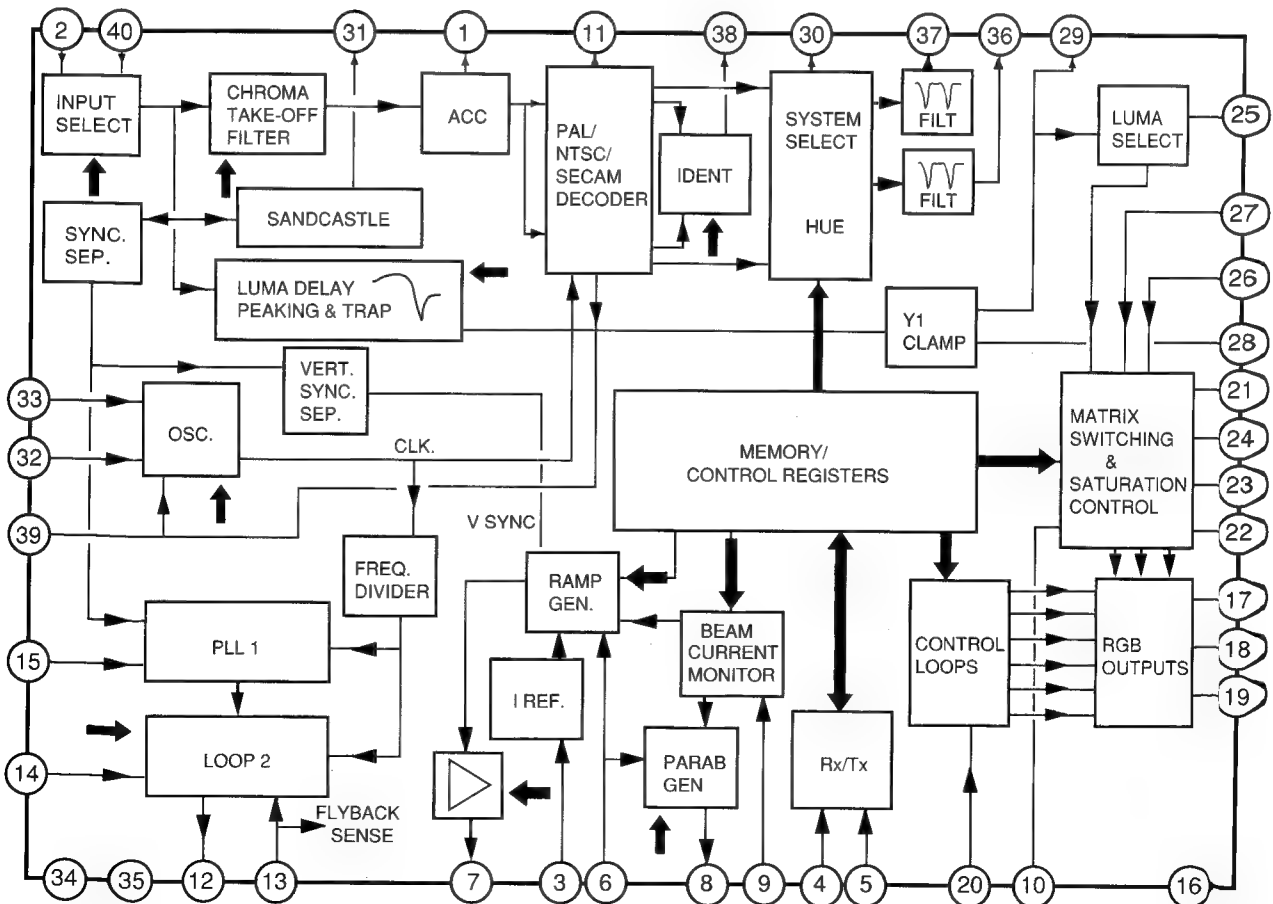
REF NO	PART NO	DESCRIPTION	REMARK
1	X-4200-317-1	BEZNET ASSY (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)	4
	X-4200-313-1	BEZNET ASSY (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)	
2	4-203-743-11	DOOR (BARE) (KV-21M3A/21M3B/21M3D/21M3E/21M3K/ 21M3L/21M3U)	
	4-203-793-01	DOOR (PRINTED) (KV-21T3A/21T3B/21T3D/21T3E/21T3K/ 21T3L/21T3R/21T3U)	
3	4-203-744-11	BUTTON, POWER	
4	*4-203-738-01	GUIDE, LIGHT	
5	1-504-698-21	SPEAKER (9X5CM) (KV-21M3K/21T3K/21T3R)	

REF NO	PART NO	DESCRIPTION	REMARK
6	1-503-258-21	SPEAKER (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E/21M3L/21T3L/ 21M3U/21T3U)	
	1-504-698-21	SPEAKER (9X5CM) (KV-21M3K/21T3K/21T3R)	
7	4-203-553-01	SHEET, BLOTTER	10-11
8	8-738-784-72	ITC	
9	4-365-808-01	SCREW (5), TAPPING	
10	8-738-784-05	PICTURE TUBE (SD169) (A51JXR61X)	
11	8-451-295-45	DEFLECTION YOKE (Y21PFA28A)	
12	3-704-495-01	SPACER, DY	
13	1-452-277-00	MAGNET, BMC	
14	1-540-006-22	CAP ASSY, HIGH-VOLTAGE	

## A BOARD IC101 TDA9806/TDA9812



## A BOARD IC301 MC44002/MC44007P





The components identified by shading and marked ! are critical for safety.

Replace only with the part number specified.

Les composants identifiés par une trame et une marque ! sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
15	*A-1638-104-A	C BOARD, COMPLETE (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)		28	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
	*A-1638-103-A	C BOARD COMPLETE (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)		29	3-701-007-00	BAND, BINDING	
16	*A-1632-634-A	A BOARD, COMPLETE	(KV-21M3A)				
	*A-1632-637-A	A BOARD, COMPLETE	(KV-21T3A)				
	*A-1632-639-A	A BOARD, COMPLETE	(KV-21M3B)				
	*A-1632-641-A	A BOARD, COMPLETE	(KV-21T3B)				
	*A-1632-635-A	A BOARD, COMPLETE	(KV-21M3D)				
	*A-1632-636-A	A BOARD, COMPLETE	(KV-21T3D)				
	*A-1632-640-A	A BOARD, COMPLETE	(KV-21M3E)				
	*A-1632-633-A	A BOARD, COMPLETE	(KV-21T3E)				
	*A-1632-624-A	A BOARD, COMPLETE	(KV-21M3K)				
	*A-1632-625-A	A BOARD, COMPLETE	(KV-21T3K)				
	*A-1632-645-A	A BOARD, COMPLETE	(KV-21M3L)				
	*A-1632-646-A	A BOARD, COMPLETE	(KV-21T3L)				
	*A-1632-642-A	A BOARD, COMPLETE	(KV-21T3R)				
	*A-1632-643-A	A BOARD, COMPLETE	(KV-21M3U)				
	*A-1632-644-A	A BOARD, COMPLETE	(KV-21T3U)				
17	! 1-571-433-21	SWITCH PUSE (AC POWER)					
18	! 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E/21M3K/21T3K/ 21T3R)					
	! 1-590-762-11	CORD, POWER (WITH PLUG) 3A/250V (KV-21M3L/21T3L/21M3U/21T3U)					
19	! 1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2)					
20	8-598-331-02	TUNER (BT-AC401) (KV-21M3A/21T3A/21M3D/21T3D/21M3E/ 21T3E/21M3K/21T3K)					
	1-693-310-13	TUNER (TELE4-002B) (KV-21M3B/21T3B/21T3R)					
	1-693-302-11	TUNER (UV1315) (KV-21M3L/21T3L/21M3U/ 21T3U)					
21	4-369-318-21	SPRING, TENSION (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
	4-200-433-01	SPRING, EXTENSION (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)					
22	*A-386-622-11	BAND, DGC (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
	*4-386-622-01	BAND, DGC (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)					
23	! 1-411-922-11	COIL, DEGAUSSING (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
	! 1-406-612-11	COIL, DEGAUSSING (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)					
24	4-203-429-02	COVER (REAR) (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
	4-203-437-02	COVER (REAR) (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)					
25	4-308-870-00	CLIP, LEAD WIRE					
26	1-452-032-00	MAGNET, DISK; 10MM Ø					
27	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø					

## SECTION 7

### ELECTRICAL PARTS LIST

When indicating parts by reference number, please include the board name.

## CAPACITORS

MF : mF, PF : mmF

## COILS

MMH : mH,  $\mu$ H : mH

A

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

- All resistors are in ohms
- F : nonflammable

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque \* sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1632-634-A	A BOARD, COMPLETE (KV-21M3A) *****		C017	1-163-038-00	CERAMIC CHIP 0.1MF (KV-21T3A/21T3B/21T3D/21T3E/ 21T3K/21T3L/21T3R/21T3U)	25V
	*A-1632-637-A	A BOARD, COMPLETE (KV-21T3A) *****		C019	1-126-960-11	ELECT 1MF	20% 50V
	*A-1632-639-A	A BOARD, COMPLETE (KV-21M3B) *****		C020	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	*A-1632-641-A	A BOARD, COMPLETE (KV-21T3B) *****		C021	1-163-059-00	CERAMIC CHIP 0.01MF	50V
	*A-1632-635-A	A BOARD, COMPLETE (KV-21M3D) *****		C022	1-126-960-11	ELECT 1MF	20% 50V
	*A-1632-636-A	A BOARD, COMPLETE (KV-21T3D) *****		C024	1-163-038-00	CERAMIC CHIP 0.1MF	25V
	*A-1632-640-A	A BOARD, COMPLETE (KV-21M3E) *****		C025	1-107-884-11	ELECT 1000MF	20% 16V
	*A-1632-633-A	A BOARD, COMPLETE (KV-21T3E) *****		C026	1-126-925-11	ELECT 470MF	20% 10V
	*A-1632-624-A	A BOARD, COMPLETE (KV-21M3K) *****		C027	1-163-038-00	CERAMIC CHIP 0.1MF	25V
	*A-1632-625-A	A BOARD, COMPLETE (KV-21T3K) *****		C028	1-163-055-00	CERAMIC CHIP 0.0047MF	10% 50V
	*A-1632-645-A	A BOARD, COMPLETE (KV-21M3L) *****		C029	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
	*A-1632-646-A	A BOARD, COMPLETE (KV-21T3L) *****		C030	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
	*A-1632-642-A	A BOARD, COMPLETE (KV-21T3R) *****		C031	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
	*A-1632-643-A	A BOARD, COMPLETE (KV-21M3U) *****		C034	1-130-489-00	FILM 0.033MF	5% 50V
	*A-1632-644-A	A BOARD, COMPLETE (KV-21T3U) *****		C036	1-164-222-11	CERAMIC CHIP 0.22MF	25V
	4-202-373-01	SPRING, IC		C101	1-164-005-11	CERAMIC CHIP 0.47MF	16V
	*4-368-683-11	SPRING, TRANSISTOR		C102	1-164-005-11	CERAMIC CHIP 0.47MF	16V
	4-382-854-11	SCREW (M3X10), P, SW (+)		C103	1-164-005-11	CERAMIC CHIP 0.47MF	16V
< CAPACITOR >				C104	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V (KV-21M3B/21T3B)
C001	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C109	1-163-038-00	CERAMIC CHIP 0.1MF	25V (KV-21M3B/21T3B)
C002	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C110	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V (KV-21M3B/21T3B)
C004	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C112	1-137-399-11	FILM 0.1MF	5% 50V (KV-21M3B/21T3B)
C005	1-126-964-11	ELECT 10MF	20% 50V	C113	1-163-059-91	CERAMIC CHIP 0.01MF	16V (KV-21M3D/21T3D)
C006	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C114	1-136-169-00	FILM 0.22MF	5% 50V (KV-21M3A/21T3A/21M3D/21T3D/21M3E/ 21T3E/21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)
C007	1-130-777-00	FILM 0.1MF	5% 63V		1-136-165-00	FILM 0.1MF	5% 50V (KV-21M3B/21T3B)
C008	1-126-965-11	ELECT 22MF	20% 50V	C116	1-126-961-11	ELECT 2.2MF	20% 50V (KV-21M3A/21T3A/21M3B/21T3B)
C010	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C117	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C011	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C120	1-126-926-11	ELECT 1000MF	20% 10V (KV-21M3A/21T3A/21M3B/21T3B)
C012	1-163-031-11	CERAMIC CHIP 0.01MF	50V		1-126-925-11	ELECT 470MF	20% 10V (KV-21M3D/21T3D/21M3D/21T3D/21M3E/ 21T3E/21M3L/21T3L/21T3R/21M3U/ 21T3U)
C014	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C121	1-136-153-00	FILM 0.01MF	5% 50V
C015	1-126-964-11	ELECT 10MF	20% 50V				
C016	1-163-038-00	CERAMIC CHIP 0.1MF (KV-21T3A/21T3B/21T3D/21T3E/ 21T3K/21T3L/21T3R/21T3U)	25V				

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C122	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V	C313	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C123	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C314	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C124	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V	C315	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C126	1-126-967-11	ELECT 47MF	20% 16V	C316	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C127	1-126-965-11	ELECT 22MF	20% 50V	C317	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C131	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C318	1-163-038-00	CERAMIC CHIP 0.1MF	25V
		(KV-21M3K/21T3K/21T3R)		C319	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C134	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	C320	1-163-038-00	CERAMIC CHIP 0.1MF	25V
		(KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E)		C321	1-126-963-11	ELECT 4.7MF	20% 50V
C138	1-126-961-11	ELECT 2.2MF	20% 50V	C322	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C139	1-126-961-11	ELECT 2.2MF	20% 50V			(KV-21M3K/21T3K/21T3R)	
C140	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C323	1-163-163-00	CERAMIC CHIP 18PF	5% 50V
C141	1-126-965-11	ELECT 22MF	20% 50V	C324	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C147	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V	C325	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C149	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C326	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C150	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C327	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C151	1-163-141-00	CERAMIC CHIP 0.001MF	10% 50V	C328	1-163-035-00	CERAMIC CHIP 0.047MF	50V
		(KV-21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)		C329	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V
C152	1-126-964-11	ELECT 10MF	20% 50V	C330	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C153	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C332	1-163-038-00	CERAMIC CHIP 0.1MF	25V
		(KV-21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)		C333	1-163-033-91	CERAMIC CHIP 0.022MF	50V
C154	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C335	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C155	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C336	1-162-638-11	CERAMIC CHIP 1MF	16V
C157	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C337	1-162-638-11	CERAMIC CHIP 1MF	16V
C158	1-126-963-11	ELECT 4.7MF	20% 50V	C338	1-126-965-11	ELECT 22MF	20% 50V
C161	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C339	1-163-031-11	CERAMIC CHIP 0.01MF	50V
		(KV-21M3B/21T3B)		C340	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C162	1-126-967-11	ELECT 47MF	20% 16V	C341	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C164	1-162-638-11	CERAMIC CHIP 1MF	16V	C344	1-126-967-11	ELECT 47MF	20% 16V
		(KV-21M3B/21T3B)		C345	1-163-139-00	CERAMIC CHIP 820PF	5% 50V
C165	1-126-967-11	ELECT 47MF	20% 16V	C347	1-163-059-91	CERAMIC CHIP 0.01MF	10% 50V
C166	1-126-933-11	ELECT 100MF	20% 10V	C348	1-163-031-11	CERAMIC CHIP 0.01MF	50V
		(KV-21M3B/21T3B)				(KV-21MB/21T3B)	
C168	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V	C349	1-126-965-11	ELECT 22MF	20% 50V
C169	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V			(KV-21MB/21T3B)	
C170	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C350	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C200	1-163-059-00	CERAMIC CHIP 0.01MF	50V	C353	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C205	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C354	1-163-197-00	CERAMIC CHIP 470PF	10% 50V
		(KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E)		C355	1-163-059-00	CERAMIC CHIP 0.01MF	50V
C300	1-126-934-11	ELECT 220MF	20% 16V	C358	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C301	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C359	1-126-964-11	ELECT 10MF	20% 50V
C302	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C360	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C303	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C361	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C304	1-163-059-91	CERAMIC CHIP 0.01MF	10% 50V	C401	1-126-967-11	ELECT 47MF	20% 16V
C305	1-126-961-11	ELECT 2.2MF	20% 50V	C402	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C306	1-136-164-00	FILM 0.082MF	5% 100V	C403	1-163-031-11	CERAMIC CHIP 0.01MF	50V
		(KV-21M3A/21T3A/21M3D/21T3D/21M3E/ 21T3E/21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)		C404	1-164-346-11	CERAMIC CHIP 1MF	16V
	1-137-580-11	FILM 0.082MF	5% 50V	C405	1-164-222-11	CERAMIC CHIP 0.22MF	25V
		(KV-21M3B/21T3B)		C406	1-126-963-11	ELECT 4.7MF	20% 50V
C307	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C407	1-104-666-11	ELECT 220MF	20% 25V
C308	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C408	1-126-941-11	ELECT 470MF	20% 25V
C309	1-126-963-11	ELECT 4.7MF	20% 50V	C410	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C310	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C412	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C413	1-126-963-11	ELECT 4.7MF	20% 50V
				C414	1-216-295-00	CONDUCTOR, CHIP	
				C415	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
				C416	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
						(KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E)	
				C417	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C425	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V

## KV-21M3/21T3

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REF.NO.	PART.NO.	DESCRIPTION	REMARK
C501	1-126-963-11	ELECT 4.7MF	20% 50V
C502	1-163-077-00	CERAMIC CHIP 0.1MF	50V
C503	1-126-952-11	ELECT 1000MF	20% 35V
C504	1-126-968-11	ELECT 100MF	20% 50V
C505	1-126-941-11	ELECT 470MF	20% 25V
C506	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C507	1-126-960-11	ELECT 1MF	20% 50V
C508	1-130-785-11	MYLAR 0.47MF	10% 100V
C509	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C510	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C600	1-126-967-11	ELECT 47MF	20% 16V
C601	1-136-516-12	FILM 0.1MF	20% 300V
C602	1-136-516-12	FILM 0.1MF	20% 300V
C603	1-161-964-91	CERAMIC 0.0047MF	250V
C604	1-161-964-91	CERAMIC 0.0047MF	250V
C606	1-113-473-11	ELECT(BLOCK) 180MF	20% 400V
C607	1-104-666-11	ELECT 220MF	20% 25V
C608	1-126-964-11	ELECT 10MF	20% 50V
C609	1-109-921-11	CERAMIC 0.0015MF	10% 500V
C610	1-104-665-11	ELECT 100MF	20% 25V
C611	1-126-964-11	ELECT 10MF	20% 50V
C612	1-113-907-51	CERAMIC 0.0022MF	20% 250V
C613	1-113-907-51	CERAMIC 0.0022MF	20% 250V
C614	1-136-538-11	FILM 0.001MF	3% 2KV
C615	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C618	1-162-116-00	CERAMIC 680PF	10% 2KV
C619	1-102-228-00	CERAMIC 470PF	10% 500V
C620	1-124-347-00	ELECT 100MF	20% 160V
C621	1-126-942-61	ELECT 1000MF	20% 25V
C622	1-111-041-11	ELECT 0.001F	20% 16V
C625	1-163-081-00	CERAMIC CHIP 0.22MF	25V
C626	1-104-661-91	ELECT 330MF	20% 16V
C627	1-126-933-11	ELECT 100MF	20% 10V
C628	1-161-964-91	CERAMIC 0.0047MF	250V
C800	1-107-642-91	ELECT 3.3MF	20% 200V
C801	1-129-746-00	FILM 0.039MF	10% 400V
C803	1-136-109-00	FILM 0.68MF	5% 200V
C804	1-126-959-11	ELECT 0.47MF	20% 50V
C806	1-102-244-00	CERAMIC 220PF	10% 500V
C807	1-107-651-11	ELECT 4.7MF	20% 250V
C808	1-136-079-00	FILM 0.01MF	3% 2KV
C809	1-161-754-00	CERAMIC 0.001MF	10% 2KV
C810	1-129-702-00	FILM 0.001MF	10% 400V
C811	1-102-228-00	CERAMIC 470PF	10% 500V
C812	1-163-059-91	CERAMIC CHIP 0.01MF	10% 50V
C813	1-162-115-00	CERAMIC 330PF	10% 2KV
C814	1-136-159-00	FILM 0.033MF	5% 50V
C815	1-162-116-00	CERAMIC 680PF	10% 2KV
C817	1-136-559-11	MYLAR 0.0047MF	10% 400V
C818	1-136-933-11	FILM 1MF	5% 100V
C819	1-162-318-11	CERAMIC 0.001MF	10% 500V
C820	1-126-951-11	ELECT 470MF	20% 35V
C822	1-104-696-11	FILM 0.015MF	10% 100V
C824	1-106-367-00	MYLAR 0.01MF	10% 400V
C827	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C828	1-126-960-11	ELECT 1MF	20% 50V
C831	1-106-375-12	MYLAR 0.022MF	10% 250V

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REF.NO.	PART.NO.	DESCRIPTION	REMARK
< FILTER >			
CF101	1-404-801-11	TRAP, CERAMIC (KV-21M3A/21T3A/21M3D/21T3D/21M3E/21T3E/21M3K/21T3K/21T3R)	
	1-409-430-11	TRAP, CERAMIC (KV-21M3B/21T3B)	
	1-409-429-11	TRAP, CERAMIC (KV-21M3L/21T3L/21M3U/21T3U)	
CF102	1-409-327-00	TRAP, CERAMIC (6.5MHz) (KV-21M3K/21T3K/21T3R)	
CF103	1-760-106-11	FILTER, CERAMIC (KV-21M3A/21T3A/21M3B/21T3B/21M3D/21T3D/21M3E/21T3E/21M3K/21T3K/21T3R)	
	1-567-100-00	FILTER, CERAMIC (KV-21M3L/21T3L/21M3U/21T3U)	
CF104	1-567-101-11	FILTER CERAMIC (KV-21M3K/21T3K/21T3R)	
CF105	1-760-154-11	TRAP, CERAMIC (KV-21M3B/21T3B)	
SWF101	1-579-120-11	FILTER, SURFACE WAVE (KV-21M3A/21T3A/21M3D/21T3D/21M3E/21T3E)	
	1-579-273-11	FILTER, SURFACE WAVE (KV-21M3B/21T3B)	
	1-579-414-11	FILTER, SURFACE WAVE (KV-21M3K/21T3K/21T3R)	
	1-767-214-11	FILTER, SURFACE WAVE (KV-21M3L/21T3L/21M3U/21T3U)	
SWF102	1-760-722-11	FILTER, SURFACE WAVE (KV-21M3B/21T3B)	
< CONNECTOR >			
CN001	*1-564-508-11	PLUG, CONNECTOR 5P	
CN201	*1-564-506-11	PLUG, CONNECTOR 3P (KV-21M3A/21T3A/21M3B/21T3B/21M3D/21T3D/21M3E/21T3E/21M3L/21T3L/21M3U/21T3U)	
	*1-564-507-11	PLUG CONNECTOR 4P (KV-21M3K/21T3K/21T3R)	
CN601	*1-580-844-11	PIN, CONNECTOR (POWER)	
CN602	*1-508-786-11	PIN, CONNECTOR (5MM PITCH) 2P (KV-21M3A/21T3A/21M3B/21T3B/21M3D/21T3D/21M3E/21T3E)	
CN603	*1-508-765-11	PIN, CONNECTOR (5MM PITCH) 3P	
CN801	*1-580-798-11	CONNECTOR PIN (DY) 6P	
CNA81	*1-568-881-51	PIN, CONNECTOR 6P	
CNA82	*1-568-880-51	PIN, CONNECTOR 5P	
< DIODE >			
D001	8-719-057-56	DIODE LS5360HL	
D002	8-759-157-40	DIODE UPC574J	
D003	8-719-109-89	DIODE RD5.6ESB2	
D004	8-719-109-85	DIODE RD5.1ES-B2	
D005	8-719-991-33	DIODE 1SS133T-77	
D006	8-719-991-33	DIODE 1SS133T-77	
D007	8-719-109-89	DIODE RD5.6ESB2	
D014	8-719-991-33	DIODE 1SS133T-77	
D016	8-719-109-89	DIODE RD5.6ESB2	
D017	8-719-109-89	DIODE RD5.6ESB2	
D100	8-719-991-33	DIODE 1SS133T-77	
D102	8-719-903-27	DIODE 1SS168 (KV-21M3B/21T3B)	
D104	8-719-903-27	DIODE 1SS168 (KV-21M3B/21T3B)	
D105	8-719-991-33	DIODE 1SS133T-77 (KV-21M3K/21T3K/21T3R)	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D106	8-719-991-33	DIODE 1SS133T-77(KV-21M3K/21T3K/21T3R)		FB608	1-535-465-11	LEAD, JUMPER (5.0MM)	
D107	8-719-991-33	DIODE 1SS133T-77		FB801	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D109	8-719-820-71	DIODE 1SV214 (KV-21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)				< IC >	
D301	8-719-991-33	DIODE 1SS133T-77		IC001	8-759-474-59	IC SAA5288ZP/M1/025 (KV-21M3A/21M3B/21M3D/21M3E/21M3K/ 21M3L/21M3U)	
D302	8-719-991-33	DIODE 1SS133T-77			8-759-475-66	IC SAA5498ZP/M1/014 (KV-21T3A/21T3B/21T3E/21T3K/ 21T3L/21T3U)	
D305	1-249-412-11	CARBON 390 5% 1/4W			8-759-475-68	IC SAA5498ZP/M1/016	(KV-21T3D)
D307	8-719-991-33	DIODE 1SS133T-77	(KV-21M3B/21T3B)		8-759-475-67	IC SAA5498ZP/M1/015	(KV-21T3R)
D308	8-719-991-33	DIODE 1SS133T-77	(KV-21M3B/21T3B)				
D310	8-719-991-33	DIODE 1SS133T-77		IC002	8-759-370-33	IC ST24C04FB6 (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E/21M3K/21M3L/ 21T3L/21T3R/21M3U/21T3U)	
D315	8-719-991-33	DIODE 1SS133T-77			8-759-251-04	IC ST24C02FB6	(KV-21T3K)
D401	8-719-109-97	DIODE RD6.8ES-B2		IC003	8-742-014-10	HIC SBX1981-51	
D402	8-719-109-97	DIODE RD6.8ES-B2		IC101	8-759-333-19	IC TDA9806 (KV-21M3A/21T3A/21M3D/21T3D/21M3E/ 21T3E/21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)	
D403	8-719-109-97	DIODE RD6.8ES-B2			8-759-333-17	IC TDA9812	(KV-21M3B/21T3B)
D404	8-719-109-97	DIODE RD6.8ES-B2		IC301	8-759-333-44	IC MC44007P (KV-21M3A/21T3A/21M3E/21T3E/21M3L/ 21T3L/21M3U/21T3U)	
D405	8-719-109-97	DIODE RD6.8ES-B2			8-759-333-45	IC MC44002P (KV-21M3B/21T3B/21M3D/21T3D/ 21M3K/21T3K/21T3R)	
D406	8-719-109-97	DIODE RD6.8ES-B2		IC302	8-759-333-46	IC MC44140P	
D407	8-719-109-97	DIODE RD6.8ES-B2		IC401	8-759-041-82	IC TDA1013B	
D408	8-719-109-97	DIODE RD6.8ES-B2		IC501	8-759-192-71	IC STV9379	
D409	8-719-991-33	DIODE 1SS133T-77		IC601	8-749-011-02	IC STR-S5706	
D410	8-719-109-97	DIODE RD6.8ES-B2		IC603	8-759-337-99	IC TDA8139	
D412	8-719-109-97	DIODE RD6.8ES-B2				< SOCKET >	
D414	8-719-991-33	DIODE 1SS133T-77		J201	1-568-267-21	JACK	
D501	8-719-302-43	DIODE ELIZ		J401	1-695-551-11	SOCKET 21P	
D600	8-719-991-33	DIODE 1SS133T-77		J1401	1-778-054-11	JACK, PIN	
D601	8-719-046-77	DIODE EM1-V1				< COIL >	
D602	8-719-312-61	DIODE EU-1Z		L101	1-410-669-31	INDUCTOR 33UH	
D603	8-719-046-78	DIODE EG-1Z-V1		L105	1-408-411-00	INDUCTOR 15UH	
D604	8-719-312-61	DIODE EU-1Z		L108	1-408-408-00	INDUCTOR 8.2UH (KV-21M3A/21T3A/21M3B/21T3B/21M3D/21T3D/ 21M3E/21T3E/21M3L/21T3L/21M3U/21T3U)	
D605	8-719-312-61	DIODE EU-1Z			1-408-405-00	INDUCTOR 4.7UH (KV-21M3K/21T3K/21T3R)	
D606	8-719-979-85	DIODE EGP20G		L109	1-403-686-11	COIL	
D607	8-719-302-43	DIODE ELIZ		L110	1-410-673-31	INDUCTOR 68UH	
D608	8-719-980-78	DIODE ERA83-006		L111	1-410-665-31	INDUCTOR 15UH	(KV-21M3B/21T3B)
D610	8-719-025-88	DIODE GBU4JL-6088		L112	1-408-417-00	INDUCTOR 47UH	
D611	8-719-991-33	DIODE 1SS133T-77		L113	1-410-985-11	INDUCTOR CHIP 0.22UH	
D612	1-535-465-11	LEAD, JUMPER (5.0MM)		L114	1-410-671-31	INDUCTOR 47UH	
D613	8-719-109-89	DIODE RD5.6ESB2		L201	1-412-531-31	INDUCTOR 33UH	
D614	8-719-109-89	DIODE RD5.6ESB2		L401	1-408-409-00	INDUCTOR 10UH	
D801	8-719-950-57	DIODE BYD33G		L501	1-412-525-41	INDUCTOR 10UH	
D802	8-719-302-43	DIODE ELIZ		L601	1-535-465-11	LEAD, JUMPER (5.0MM)	
D803	8-719-945-80	DIODE ERC06-15S		L602	1-408-609-41	INDUCTOR 33UH	
D805	8-719-928-08	DIODE ERD28-08S		L603	1-410-669-31	INDUCTOR 33UH	
D806	8-719-302-43	DIODE ELIZ		L604	1-408-417-00	INDUCTOR 47UH	
D807	8-719-991-33	DIODE 1SS133T-77		L800	1-412-553-11	INDUCTOR 3.3MMH	
D809	8-719-302-43	DIODE ELIZ					
		< FUSE >					
†F601	† 1-576-231-21	FUSE (H.B.C.) 4A,250V					
	*1-533-725-11	HOLDER, FUSE (F601)					
		< FERRITE BEAD >					
FB001	1-412-911-11	FERRITE BEAD INDUCTOR 1.1UH					
FB002	1-412-911-11	FERRITE BEAD INDUCTOR 1.1UH					
FB003	1-535-465-11	LEAD, JUMPER (5.0MM)					
FB601	1-412-911-11	FERRITE BEAD INDUCTOR 1.1UH					
FB602	1-535-465-11	LEAD, JUMPER (5.0MM)					
FB603	1-412-911-11	FERRITE BEAD INDUCTOR 1.1UH					
FB604	1-412-911-11	FERRITE BEAD INDUCTOR 1.1UH					
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH					
FB607	1-535-465-11	LEAD, JUMPER (5.0MM)					

## KV-21M3/21T3

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L801	1-420-872-00	COIL, AIR CORE 1.9UH		Q600	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L802	1-411-635-11	COIL, AIR-CORE 0.7UH		Q602	8-729-900-65	TRANSISTOR DTA144ES	
L803	1-459-390-00	COIL (WITH CORE)		Q801	8-729-140-50	TRANSISTOR 2SC3209LK	
L804	1-459-105-21	COIL(WITH CORE)		Q802	8-729-033-85	TRANSISTOR S2000N-16E305A	
L805	1-412-531-31	INDUCTOR 330H		Q803	8-729-900-89	TRANSISTOR DTC144ES	
L806	1-459-652-12	HLC		Q804	8-729-019-01	TRANSISTOR 2SD2394-EF	
L807	1-535-465-11	LEAD, JUMPER (5.0MM)		Q805	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< IC LINK >				< RESISTOR >			
PS602	1-532-686-91	LINK, IC 2.7A (ICP-F75)		JR003	1-216-296-00	CONDUCTOR, CHIP	
PS603	1-532-686-91	LINK, IC 2.7A (ICP-F75)		JR004	1-216-296-00	CONDUCTOR, CHIP	
PS605	1-535-465-11	LEAD, JUMPER (5.0MM)		JR007	1-216-295-00	CONDUCTOR, CHIP	
< TRANSISTOR >				JR008	1-216-295-00	CONDUCTOR, CHIP	
Q001	8-729-922-66	TRANSISTOR 2SC2410SN		JR009	1-216-295-00	CONDUCTOR, CHIP	
Q002	8-729-119-76	TRANSISTOR 2SA1175-HFE		JR011	1-216-295-00	CONDUCTOR, CHIP	(KV-21M3B/21T3B)
Q005	8-729-620-06	TRANSISTOR 2SC3052-EF		JR012	1-216-295-00	CONDUCTOR, CHIP	
Q006	8-729-119-76	TRANSISTOR 2SA1175-HFE		JR013	1-216-295-00	CONDUCTOR, CHIP	
Q007	8-729-119-78	TRANSISTOR 2SC2785-HFE		JR014	1-216-296-00	CONDUCTOR, CHIP	
Q008	8-729-119-78	TRANSISTOR 2SC2785-HFE		JR015	1-216-295-00	CONDUCTOR, CHIP	
Q009	8-729-119-78	TRANSISTOR 2SC2785-HFE		JR017	1-216-295-00	CONDUCTOR, CHIP	
Q010	8-729-620-06	TRANSISTOR 2SC3052-EF		JR018	1-216-296-00	CONDUCTOR, CHIP	
Q011	8-729-900-89	TRANSISTOR DTC144ES		JR021	1-216-296-00	CONDUCTOR, CHIP	
Q012	8-729-620-06	TRANSISTOR 2SC3052-EF		JR022	1-216-296-00	CONDUCTOR, CHIP	
Q013	8-729-620-06	TRANSISTOR 2SC3052-EF		JR023	1-216-295-00	CONDUCTOR, CHIP	
Q014	8-729-620-06	TRANSISTOR 2SC3052-EF		JR027	1-216-296-00	CONDUCTOR, CHIP	
Q015	8-729-620-06	TRANSISTOR 2SC3052-EF		JR028	1-216-296-00	CONDUCTOR, CHIP	
Q016	8-729-216-22	TRANSISTOR 2SA1162-G		JR029	1-216-295-00	CONDUCTOR, CHIP	
Q100	8-729-901-01	TRANSISTOR DTC144EK		JR030	1-216-296-00	CONDUCTOR, CHIP	
Q101	8-729-900-80	TRANSISTOR DTC114ES (KV-21M3B/21T3B)		JR031	1-216-296-91	CONDUCTOR, CHIP	
Q102	8-729-900-80	TRANSISTOR DTC114ES (KV-21M3B/21T3B)		JR032	1-216-296-00	CONDUCTOR, CHIP	
Q103	8-729-900-80	TRANSISTOR DTC114ES (KV-21M3B/21T3B)		JR034	1-216-296-00	CONDUCTOR, CHIP	
Q105	8-729-901-01	TRANSISTOR DTC144EK		JR035	1-216-295-00	CONDUCTOR, CHIP	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE		R001	1-216-198-91	METAL GLAZE 1K 5% 1/8W	
Q109	8-729-022-54	TRANSISTOR 2SC3779C,D-AA (KV-21M3B/21T3B)		R002	1-216-033-00	METAL GLAZE 220 5% 1/10W	
Q111	8-729-900-90	TRANSISTOR DTC144ES (KV-21M3K/21T3K/21T3R)		R005	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE		R006	1-126-089-00	METAL GLAZE 47K 5% 1/10W	
Q113	8-729-900-90	TRANSISTOR DTC144ES-TP (KV-21M3K/21T3K/21T3R)			1-216-085-00	METAL GLAZE 33K 5% 1/10W (KV-21M3B/21T3B/ 21M3D/21T3D/ 21M3K/21T3K/ 21T3R)	
Q114	8-729-901-01	TRANSISTOR DTC144EK		R008	1-216-031-00	METAL GLAZE 180 5% 1/10W	
Q115	8-729-026-41	TRANSISTOR 2SA933AS-QRT (KV-21M3B/21T3B)		R009	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q116	8-729-900-89	TRANSISTOR DTC144ES (KV-21M3B/21T3B)		R010	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q300	8-729-900-80	TRANSISTOR DTC114ES		R011	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE		R012	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
Q302	8-729-900-80	TRANSISTOR DTC114ES		R013	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q303	8-729-900-80	TRANSISTOR DTC114ES		R014	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
Q304	8-729-900-80	TRANSISTOR DTC114ES		R015	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
Q305	8-729-900-80	TRANSISTOR DTC114ES		R016	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q306	8-729-900-80	TRANSISTOR DTC114ES		R017	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q307	8-729-026-41	TRANSISTOR 2SA933AS-QRT (KV-21M3B/21T3B)		R018	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
Q308	8-729-901-01	TRANSISTOR DTC144EK (KV-21M3B/21T3B/21M3D/ 21T3D/21M3K/21T3K)		R019	1-216-174-00	METAL GLAZE 100 5% 1/8W	
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE		R020	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
Q402	8-729-216-22	TRANSISTOR 2SA1162-G		R021	1-216-174-00	METAL GLAZE 100 5% 1/8W	
Q403	8-729-620-06	TRANSISTOR 2SC3052-EF		R022	1-216-295-00	CONDUCTOR, CHIP	
Q404	8-729-620-06	TRANSISTOR 2SC3052-EF		R024	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
				R025	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
				R026	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R027	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W	
				R028	1-216-081-00	METAL GLAZE 22K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R029	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R108	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R030	1-215-900-11	METAL OXIDE	22K 5% 2W F	R109	1-216-025-00	METAL GLAZE	100 5% 1/10W (KV-21M3B/21T3B)
R031	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R110	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R032	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R111	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R033	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R112	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W (KV-21M3B/21T3B)
R034	1-249-429-11	CARBON	10K 5% 1/4W	R113	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W (KV-21M3B/21T3B)
R035	1-247-863-91	CARBON	22K 5% 1/4W	R114	1-216-073-00	METAL GLAZE	10K 5% 1/10W (KV-21M3B/21T3B)
R036	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R115	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W (KV-21M3B/21T3B)
R037	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R116	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R039	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R117	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R040	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R118	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R042	1-216-230-00	METAL GLAZE	22K 5% 1/8W	R122	1-216-029-00	METAL GLAZE	150 5% 1/10W (KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E/ 21M3L/21T3L/21M3U/21T3U)
R044	1-216-075-00	METAL GLAZE	12K 5% 1/10W		1-216-025-00	METAL GLAZE	100 5% 1/10W (KV-21M3K/21T3K/21T3R)
R045	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R123	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R046	1-216-105-91	METAL GLAZE	220K 5% 1/10W	R124	1-216-025-00	METAL GLAZE	100 5% 1/10W
R047	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R125	1-216-025-00	METAL GLAZE	100 5% 1/10W
R048	1-216-174-00	METAL GLAZE	100 5% 1/8W	R126	1-216-025-00	METAL GLAZE	100 5% 1/10W
R049	1-216-041-00	METAL GLAZE	470 5% 1/10W	R127	1-216-180-00	METAL GLAZE	180 5% 1/8W
R052	1-216-238-91	METAL GLAZE	47K 5% 1/8W	R128	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R055	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R133	1-249-429-11	CARBON	10K 5% 1/4W
R060	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R134	1-216-031-00	METAL GLAZE	180 5% 1/10W (KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E/ 21M3K/21T3K/21T3R)
R061	1-216-073-00	METAL GLAZE	10K 5% 1/10W		1-216-029-00	METAL GLAZE	150 5% 1/10W (KV-21M3L/21T3L/21M3U/21T3U)
R062	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R136	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R063	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R137	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R064	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R138	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R065	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R141	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R066	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R142	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R067	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R143	1-216-295-00	CONDUCTOR, CHIP	
R068	1-216-073-00	METAL GLAZE	10K 5% 1/10W				(KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E/ 21M3K/21T3K/21T3R)
R069	1-247-863-91	CARBON	22K 5% 1/4W	R144	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W (KV-21M3K/21T3K/21T3R)
R070	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R145	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W (KV-21M3K/21T3K/21T3R)
R071	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R146	1-216-043-91	METAL GLAZE	560 5% 1/10W
R072	1-216-230-00	METAL GLAZE	22K 5% 1/8W	R147	1-216-043-91	METAL GLAZE	560 5% 1/10W (KV-21M3K/21T3K/21T3R)
R073	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R149	1-216-057-00	METAL GLAZE	2.2K 5% 1/8W (KV-21M3K/21T3K/21T3R)
R074	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R151	1-216 097-00	METAL GLAZE	100K 5% 1/1W (KV-21M3K/21T3K/21T3L/21T3R/ 21M3U/21T3U)
R075	1-249-436-11	CARBON	39K 5% 1/4W	R153	1-216-097-00	METAL GLAZE	100K 5% 1/1W (KV-21M3K/21T3K/21T3L/21T3R/ 21M3U/21T3U)
R078	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R154	1-216-081-00	METAL GLAZE	22K 5% 1/1W
R079	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R155	1-216-081-00	METAL GLAZE	22K 5% 1/1W
R080	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R081	1-249-438-11	CARBON	56K 5% 1/4W				
R088	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R089	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R090	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R091	1-249-427-11	CARBON	6.8K 5% 1/4W				
R093	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R094	1-216-085-00	METAL GLAZE	33K 5% 1/10W				
R095	1-216-081-00	METAL GLAZE	22K 5% 1/10W				
R096	1-216-033-00	METAL GLAZE	220 5% 1/10W				
R097	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W				
R098	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W				
R099	1-216-200-11	METAL GLAZE	1.2K 5% 1/8W				
R102	1-216-234-00	METAL GLAZE	33K 5% 1/8W				
R104	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W (KV-21M3B/21T3B)				
R105	1-216-025-00	METAL GLAZE	100 5% 1/10W (KV-21M3B/21T3B)				
R106	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W (KV-21M3B/21T3B)				
R107	1-216-017-91	METAL GLAZE	47 5% 1/10W (KV-21M3B/21T3B)				



## KV-21M3/21T3

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R157	1-216-049-00	METAL GLAZE 1K 5%	1/10W (KV-21M3B/21T3B)	R328	1-216-258-00	METAL GLAZE 330K 5%	1/8W
R158	1-216-039-00	METAL GLAZE 390 5%	1/10W (KV-21M3A/21T3A/21M3D/21T3D/21M3E/ 21T3E/21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)	R330	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
	1-216-031-00	METAL GLAZE 180 5%	1/10W (KV-21M3B/21T3B)	R332	1-535-465-11	LEAD, JUMPER (5.0MM)	
R159	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R333	1-216-037-00	METAL GLAZE 330 5%	1/10W
R160	1-216-238-91	METAL GLAZE 47K 5%	1/8W	R334	1-216-025-00	METAL GLAZE 100 5%	1/10W
R161	1-216-295-00	CONDUCTOR, CHIP (KV-21M3A/21T3A/21M3D/21T3D/21M3E/ 21T3E/21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)		R335	1-216-025-00	METAL GLAZE 100 5%	1/10W
R162	1-216-017-91	METAL GLAZE 47 5%	1/10W (KV-21M3B/21T3B)	R336	1-216-174-00	METAL GLAZE 100 5%	1/8W
R163	1-249-407-11	CARBON 150 5%	1/4W	R337	1-216-025-00	METAL GLAZE 100 5%	1/10W
R167	1-216-246-00	METAL GLAZE 100K 5%	1/8W	R339	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R168	1-249-407-11	CARBON 150 5%	1/4W	R340	1-216-121-91	METAL GLAZE 1M 5%	1/10W
R169	1-216-073-00	METAL GLAZE 10K 5%	1/10W (KV-21M3B/21T3B)	R341	1-216-093-00	METAL GLAZE 68K 5%	1/10W
R170	1-216-063-91	METAL GLAZE 3.9K 5%	1/10W (KV-21M3B/21T3B)	R342	1-216-186-00	METAL GLAZE 330 5%	1/8W
R171	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W (KV-21M3B/21T3B)	R343	1-216-295-00	CONDUCTOR, CHIP	
R175	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R344	1-216-295-00	CONDUCTOR, CHIP	
R176	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R345	1-216-238-91	METAL GLAZE 47K 5%	1/8W
R177	1-216-295-00	CONDUCTOR, CHIP		R347	1-216-041-00	METAL GLAZE 470 5%	1/10W (KV-21M3B/21T3B)
R178	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R348	1-216-073-00	METAL GLAZE 10K 5%	1/10W (KV-21M3B/21T3B)
R179	1-216-212-00	METAL GLAZE 3.9K 5%	1/8W	R349	1-216-105-91	METAL GLAZE 220K 5%	1/10W (KV-21M3B/21T3B)
R180	1-216-049-00	METAL GLAZE 1K 5%	1/10W (KV-21M3B/21T3B)	R350	1-216-033-00	METAL GLAZE 220 5%	1/10W (KV-21M3B/21T3B)
R181	1-216-182-00	METAL GLAZE 220 5%	1/8W	R351	1-216-292-11	METAL GLAZE 8.2M 5%	1/8W (KV-21M3B/21T3B/21M3D/21T3D/ 21M3K/21T3K/21T3R)
R182	1-216-182-00	METAL GLAZE 220 5%	1/8W	R352	1-216-262-00	METAL GLAZE 470K 5%	1/8W
R205	1-260-089-11	CARBON 150 5%	1/2W	R353	1-247-804-11	CARBON 75 5%	1/4W
R301	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R354	1-216-025-00	METAL GLAZE 100 5%	1/10W
R302	1-216-037-00	METAL GLAZE 330 5%	1/10W	R355	1-216-121-91	METAL GLAZE 1M 5%	1/10W
R303	1-216-090-00	METAL GLAZE 51K 5%	1/10W	R356	1-216-119-00	METAL GLAZE 820K 5%	1/10W
R304	1-216-025-00	METAL GLAZE 100 5%	1/10W	R357	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R305	1-216-025-00	METAL GLAZE 100 5%	1/10W	R358	1-216-001-00	METAL GLAZE 10 5%	1/10W
R306	1-216-113-00	METAL GLAZE 470K 5%	1/10W	R359	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R307	1-216-121-91	METAL GLAZE 1M 5%	1/10W	R361	1-216-023-00	METAL GLAZE 82 5%	1/10W
R308	1-216-234-00	METAL GLAZE 33K 5%	1/8W	R362	1-216-023-00	METAL GLAZE 82 5%	1/10W
R309	1-216-121-91	METAL GLAZE 1M 5%	1/10W	R363	1-216-023-00	METAL GLAZE 82 5%	1/10W
R310	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R401	1-216-049-00	METAL GLAZE 1K 5%	1/10W (KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E)
R311	1-216-093-00	METAL GLAZE 68K 5%	1/10W		1-216-041-00	METAL GLAZE 470 5%	1/10W (KV-21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)
R312	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R402	1-249-431-11	CARBON 15K 5%	1/4W
R313	1-216-045-00	METAL GLAZE 680 5%	1/10W	R403	1-249-431-11	CARBON 15K 5%	1/4W
R314	1-216-045-00	METAL GLAZE 680 5%	1/10W	R405	1-249-389-11	CARBON 4.7 5%	1/4W F
R315	1-216-045-00	METAL GLAZE 680 5%	1/10W	R406	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R316	1-216-033-00	METAL GLAZE 220 5%	1/10W	R407	1-216-041-00	METAL GLAZE 470 5%	1/10W
R317	1-216-182-00	METAL GLAZE 220 5%	1/8W	R408	1-216-033-00	METAL GLAZE 220 5%	1/10W
R318	1-216-021-00	METAL GLAZE 68 5%	1/10W	R409	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R322	1-216-022-00	METAL GLAZE 75 5%	1/10W	R410	1-247-804-11	CARBON 75 5%	1/4W (KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E/ 21M3K/21T3K/21T3R)
R323	1-216-089-00	METAL GLAZE 47K 5%	1/10W		1-247-698-11	CARBON 68 5%	1/4W (KV-21M3L/21T3L/21M3U/21T3U)
R325	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R411	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R326	1-216-095-00	METAL GLAZE 82K 5%	1/10W (KV-21M3B/21T3B/21M3D/21T3D/ 21M3K/21T3K/21T3R)	R412	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R327	1-216-097-00	METAL GLAZE 100K 5%	1/10W (KV-21M3B/21T3B/21M3D/21T3D/ 21M3K/21T3K/21T3R)	R413	1-216-097-00	METAL GLAZE 100K 5%	1/10W
				R414	1-216-097-00	METAL GLAZE 100K 5%	1/10W
				R415	1-216-222-00	METAL GLAZE 10K 5%	1/8W
				R416	1-216-081-00	METAL GLAZE 22K 5%	1/10W



The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque \* sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

KV-21M3/21T3

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R417	1-216-295-00	CONDUCTOR, CHIP		R825	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R501	1-216-675-11	METAL CHIP 10K 0.50%	1/10W	R826	1-535-143-11	LEAD, JUMPER (10.0MM)	
R502	1-216-677-11	METAL CHIP 12K 0.50%	1/10W	R828	1-216-115-00	METAL GLAZE 560K 5%	1/10W
R503	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R834	1-215-869-11	METAL OXIDE 1K 5%	1W F
R504	1-216-095-00	METAL GLAZE 82K 5%	1/10W	R835	1-249-413-11	CARBON 470 5%	1/4W
R505	1-216-075-00	METAL GLAZE 12K 5%	1/10W	< VARIABLE RESISTOR >			
R506	1-216-682-11	METAL CHIP 20K 0.50%	1/10W	RV102	1-241-765-11	RES, ADJ, CARBON 22K	(KV-21M3B/21T3B)
		(KV-21M3A/21T3A/21M3B/21T3B/ 21M3D/21T3D/21M3E/21T3E)		RV801	1-241-630-11	RES, ADJ, CARBON 10K	
	1-216-080-00	METAL CHIP 20K 5%	1/10W	< SWITCH >			
		(KV-21M3K/21T3K/21M3L/21T3L/ 21T3R/21M3U/21T3U)		S001	1-571-532-21	SWITCH, TACTIL	
R507	1-216-350-11	METAL OXIDE 1.2 5%	1W F	S002	1-571-532-21	SWITCH, TACTIL	
R508	1-215-865-11	METAL OXIDE 220 5%	1W F	S003	1-571-532-21	SWITCH, TACTIL	
R509	1-249-387-11	CARBON 3.3 5%	1/4W F	S004	1-571-532-21	SWITCH, TACTIL	
R600	1-216-365-00	METAL OXIDE 0.47 5%	2W F	S005	1-571-532-21	SWITCH, TACTIL	
R601	1-202-962-11	WIREWOUND 3.3 5%	10W	S006	1-571-532-21	SWITCH, TACTIL	
R603	1-215-858-00	METAL OXIDE 15 5%	1W F	S601	1-571-433-21	SWITCH, PUSH (AC POWER)	
R604	1-215-927-00	METAL OXIDE 47K 5%	3W F	< TRANSFORMER >			
R606	1-249-441-11	CARBON 100K 5%	1/4W	T601	1-427-962-11	TRANSFORMER, LINE FILTER	
R607	1-216-366-00	METAL OXIDE 0.56 5%	2W F	T602	1-429-207-11	TRANSFORMER, CONVERTER	
R608	1-216-645-11	METAL CHIP 560 0.50%	1/10W	T801	1-437-090-31	HDT	
R609	1-215-859-00	METAL OXIDE 22 5%	1W F	T802	1-453-199-11	TRANSFORMER ASSY, FLYBACK (MX-1741/U2)	
R610	1-249-419-11	CARBON 1.5K 5%	1/4W	< THERMISTOR >			
R611	1-215-430-00	METAL 2.4K 1%	1/4W	THP601	1-808-059-31	THERMISTOR, POSITIVE	
R612	1-202-719-91	SOLID 1M 10%	1/2W	< TUNER >			
R613	1-535-143-11	LEAD, JUMPER (10.0MM)		TU101	8-598-331-02	TUNER (BT-AC401)	
R614	1-218-265-21	METAL 8.2M 5%	1W			(KV-21M3A/21T3A/21M3D/21T3D/21M3E/ 21T3E/21M3K/21T3K)	
R615	1-217-418-61	FUSIBLE 0.47 10%	1/2W F		1-693-310-13	TUNER (TELE4-002B)	(KV-21M3B/21T3B/21T3R)
R617	1-216-659-11	METAL CHIP 2.2K 0.50%	1/10W		1-693-302-11	TUNER (UV1315)	(KV-21M3L/21T3L/21M3U/ 21T3U)
R618	1-216-659-11	METAL CHIP 2.2K 0.50%	1/10W	< CRYSTAL >			
R620	1-215-479-00	METAL 270K 1%	1/4W	X001	1-578-774-11	VIBRATOR, CRYSTAL	
R621	1-249-429-11	CARBON 10K 5%	1/4W	X301	1-760-907-21	VIBRATOR, CRYSTAL (KV-21M3L/21T3L/21T3R)	
R622	1-247-895-91	CARBON 470K 5%	1/4W	X302	1-760-710-21	VIBRATOR, CRYSTAL	
R623	1-216-081-00	METAL GLAZE 22K 5%	1/10W	*****			
R624	1-216-033-00	METAL GLAZE 220 5%	1/10W	*A-1638-104-A	C BOARD COMPLETE	(KV-21M3A/21T3A/21M3B/ 21T3B/21M3D/21T3D/ 21M3E/21T3E)	
R625	1-216-073-00	METAL GLAZE 10K 5%	1/10W				
R626	1-216-089-00	METAL GLAZE 47K 5%	1/10W	*A-1638-103-A	C BOARD COMPLETE	(KV-21M3K/21T3K/21M3L/ 21T3L/21T3R/21M3U/ 21T3U)	
R627	1-216-346-00	METAL OXIDE 0.56 5%	1W F				
R630	1-249-401-11	CARBON 47 5%	1/4W	< CAPACITOR >			
R800	1-215-887-00	METAL OXIDE 150 5%	2W F	C701	1-102-074-00	CERAMIC 0.001MF	10% 50V
R801	1-247-891-00	CARBON 330K 5%	1/4W	C702	1-102-117-00	CERAMIC 820PF	10% 50V
R802	1-247-807-31	CARBON 100 5%	1/4W	C703	1-102-117-00	CERAMIC 820PF	10% 50V
R803	1-216-081-00	METAL GLAZE 22K 5%	1/10W	C704	1-102-824-00	CERAMIC 470PF	5% 50V
R804	1-217-778-11	FUSIBLE 1K 5%	1W F	C705	1-102-824-00	CERAMIC 470PF	5% 50V
R806	1-216-349-00	METAL OXIDE 1 5%	1W F	C706	1-102-824-00	CERAMIC 470PF	5% 50V
R807	1-249-399-11	CARBON 33 5%	1/4W	C707	1-107-651-11	ELECT 4.7MF	20% 250V
R808	1-260-114-11	CARBON 18K 5%	1/2W				
R810	1-247-895-91	CARBON 470K 5%	1/4W				
R811	1-215-890-11	METAL OXIDE 470 5%	2W F				
R813	1-216-266-00	METAL GLAZE 680K 5%	1/8W				
R814	1-249-443-11	CARBON 0.47 5%	1/4W F				
R815	1-216-250-00	METAL GLAZE 150K 5%	1/8W				
R816	1-216-369-00	METAL OXIDE 1 5%	2W F				
R817	1-216-447-00	METAL OXIDE 27 5%	2W F				
R818	1-260-115-11	CARBON 22K 5%	1/2W				
R819	1-249-441-11	CARBON 100K 5%	1/4W				
R820	1-249-935-11	CARBON 3.3K 5%	1/4W F				
R821	1-216-295-00	CONDUCTOR, CHIP					
R822	1-216-107-00	METAL GLAZE 270K 5%	1/10W				
R823	1-249-413-11	CARBON 470 5%	1/4W				
R824	1-216-125-00	METAL GLAZE 1.5M 5%	1/10W				

## KV-21M3/21T3

C

The components identified by shading and marked † are critical for safety. Replace only with the part number specified.

Les composants identifiés par une trame et une marque † sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C709	1-117-215-51	CERAMIC 0.001MF	3KV	R719	1-260-105-11	CARBON 3.3K 5% 1/2W	
C710	1-126-967-11	ELECT 47MF	20% 16V	R720	1-216-487-11	METAL OXIDE 12K 5% 3W F	
C711	1-101-880-00	CERAMIC 47PF	5% 50V	R721	1-216-487-11	METAL OXIDE 12K 5% 3W F	
C712	1-101-880-00	CERAMIC 47PF	5% 50V	R722	1-216-487-11	METAL OXIDE 12K 5% 3W F	
C713	1-101-880-00	CERAMIC 47PF	5% 50V	R723	1-535-143-11	LEAD, JUMPER (10.0MM)	
< CONNECTOR >				R724	1-260-117-11	CARBON 33K 5% 1/2W	
CNC71	*1-568-881-51	PIN, CONNECTOR 6P		R729	1-216-348-00	METAL OXIDE 0.82 5% 1W F	
CNC72	*1-568-880-51	PIN, CONNECTOR 5P		R734	1-247-815-91	CARBON 220 5% 1/4W	
CNC76	1-695-915-11	TAB (CONTACT)		R735	1-247-815-91	CARBON 220 5% 1/4W	
CNC77	1-695-915-11	TAB (CONTACT)		R736	1-247-815-91	CARBON 220 5% 1/4W	
< DIODE >				R744	1-260-103-11	CARBON 2.2K 5% 1/2W	
D701	8-719-991-33	DIODE 1SS133T-77		R745	1-260-103-11	CARBON 2.2K 5% 1/2W	
D702	8-719-991-33	DIODE 1SS133T-77		R746	1-260-103-11	CARBON 2.2K 5% 1/2W	
D703	8-719-991-33	DIODE 1SS133T-77		< VARIABLE RESISTOR >			
D704	8-719-991-33	DIODE 1SS133T-77		RV702	1-241-656-21	RES, ADJ, METAL FILM 110Ω	
D705	8-719-991-33	DIODE 1SS133T-77		***** MISCELLANEOUS *****			
D706	8-719-991-33	DIODE 1SS133T-77		† 1-411-922-11 COIL, DEGAUSSING (KV-21M3A/21T3A/21M3B/21T3E/21M3D/21T3D/21M3E/21T3E)			
D707	8-719-991-33	DIODE 1SS133T-77		† 1-406-612-11 COIL, DEGAUSSING (KV-21M3K/21T3K/21M3L/21T3I/21T3R/21M3U/21T3U)			
D708	8-719-991-33	DIODE 1SS133T-77		1-452-032-00	MAGNET, DISC; 10MM Ø		
D709	8-719-991-33	DIODE 1SS133T-77		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø		
D716	8-719-991-33	DIODE 1SS133T-77		1-452-277-00	MAGNET, BMC		
D717	8-719-054-81	DIODE 1SS292T-77		† 1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2)		
D718	8-719-991-33	DIODE 1SS133T-77		1-503-258-21	SPEAKER (KV-21M3A/21T3A/21M3B/21T3E/21M3D/21T3D/21M3E/21T3E/21M3L/21T3I/21M3U/21T3U)		
D719	8-719-054-81	DIODE 1SS292T-77		1-504-698-21	SPEAKER (9X5CM) (KV-21M3K/21T3K/21T3R)		
D722	8-719-991-33	DIODE 1SS133T-77		† 1-540-006-21	CAP ASSY, HIGH-VOLTAGE		
		(KV-21M3A/21T3A/21M3B/21T3B/21M3D/21T3D/21M3E/21T3E)		† 1-571-433-21	SWITCH, PUSH (AC POWER)		
D723	8-719-991-33	DIODE 1SS133T-77		† 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-21M3A/21T3A/21M3B/21T3E/21M3D/21T3D/21M3E/21T3E/21M3K/21T3R)		
D724	8-719-054-81	DIODE 1SS292T-77		† 1-590-762-11	CORD POWER (WITH PLUG) 2.5A/250V (KV-21M3L/21T3I/21M3U/21T3U)		
< CRT SOCKET >				8-598-331-02	TUNER (BT-AC401) (KV-21M3A/21T3A/21M3D/21T3D/21M3E/21T3E/21M3K/21T3R)		
J701	† 1-526-990-21	SOCKET, CRT		1-693-310-13	TUNER (TELE4-002B) (KV-21M3E/21T3B/21T3R)		
< TRANSISTOR >				1-693-302-11	TUNER (UV1315) (KV-21M3L/21T3L/21M3U/21T3U)		
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE		† 8-738-784-72	ITC		
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE		† 8-451-295-45	DEFLECTION YOKE (Y21PFA2E)		
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE		V901	† 8-738-784-05	PICTURE TUBE (SD-169) (A51X661X)	
Q704	8-729-906-70	TRANSISTOR BF871-127		*****			
Q705	8-729-906-70	TRANSISTOR BF871-127					
Q706	8-729-906-70	TRANSISTOR BF871-127					
Q707	8-729-200-17	TRANSISTOR 2SA1091-0					
Q708	8-729-200-17	TRANSISTOR 2SA1091-0					
Q709	8-729-200-17	TRANSISTOR 2SA1091-0					
< RESISTOR >							
R700	1-260-087-81	CARBON 100 5% 1/2W					
R701	1-249-417-11	CARBON 1K 5% 1/4W					
R702	1-249-417-11	CARBON 1K 5% 1/4W					
R705	1-247-791-91	CARBON 22 5% 1/4W					
R706	1-247-791-91	CARBON 22 5% 1/4W					
R707	1-247-791-91	CARBON 22 5% 1/4W					
R708	1-247-815-91	CARBON 220 5% 1/4W					
R709	1-247-815-91	CARBON 220 5% 1/4W					
R710	1-247-815-91	CARBON 220 5% 1/4W					
R711	1-249-417-11	CARBON 1K 5% 1/4W					
R714	1-249-417-11	CARBON 1K 5% 1/4W					
R715	1-249-417-11	CARBON 1K 5% 1/4W					
R716	1-249-417-11	CARBON 1K 5% 1/4W					
R717	1-260-105-11	CARBON 3.3K 5% 1/2W					
R718	1-260-105-11	CARBON 3.3K 5% 1/2W					

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
ACCESSORIES AND PACKING MATERIALS *****							
1-770-783-11		CONNECTOR, CONVERSION (KV-21M3K/21T3K/21T3R)					
4-203-765-41		MANUAL, INSTRUCTION (KV-21M3A/21T3A) (ITALIAN)					
4-203-765-51		MANUAL, INSTRUCTION (KV-21M3B/21T3B) (FRENCH/ITALIAN/GERMAN/DUTCH)					
4-203-765-11		MANUAL, INSTRUCTION (KV-21M3D/21T3D) (ENGLISH/DANISH/SWEDISH/FINNISH/ GREEK/DUTCH/NORWEGIAN)					
4-203-794-11		MANUAL, INSTRUCTION (KV-21M3D/21T3D) (GERMAN/ENGLISH)					
4-203-765-71		MANUAL, INSTRUCTION (KV-21M3E/21T3E) (SPANISH)					
4-203-765-81		MANUAL, INSTRUCTION (KV-21M3E/21T3E) (PORTUGUESE/SPANISH)					
4-203-796-91		MANUAL, INSTRUCTION (KV-21M3K/21T3K) (HUNGARIAN/POLISH/CZECH/ENGLISH/ RUSSIAN/BULGARIAN/FRENCH)					
4-203-796-61		MANUAL, INSTRUCTION (KV-21M3L/21T3L/21M3U/21T3U) (ENGLISH)					
4-203-796-91		MANUAL, INSTRUCTION (KV-21T3R) (RUSSIAN/BULGARIAN/ENGLISH)					
*4-042-477-01		BAG, PROTECTION (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
*4-039-905-02		BAG, PROTECTION (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)					
*4-059-225-01		INDIVIDUAL CARTON (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
*4-059-533-01		INDIVIDUAL CARTON (KV-21M3K/21T3K/21T3R)					
*4-059-226-01		INDIVIDUAL CARTON (KV-21M3L/21T3L/21M3U/21T3U)					
*4-058-094-11		CUSHION (LOWER) (ASSY) (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
*4-058-094-01		CUSHION (LOWER) (ASSY) (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)					
*4-058-093-11		CUSHION (UPPER) (ASSY) (KV-21M3A/21T3A/21M3B/21T3B/21M3D/ 21T3D/21M3E/21T3E)					
*4-058-093-01		CUSHION (UPPER) (ASSY) (KV-21M3K/21T3K/21M3L/21T3L/21T3R/ 21M3U/21T3U)					
REMOTE COMMANDER *****							
1-473-194-11		COMMANDER, STANDARD TYPE (RM-836)					